

GOVERNMENT TRANSACTIONS



Gross National Product in Current and Constant Dollars			
		1983	1984
Gross national product.....		3,304.8	3,661
Personal consumption expenditures.....		2,155.9	2,155.9
Durable goods.....		279.8	279.8
Nondurable goods.....		801.7	801.7
Services.....		1,074	1,074
Gross private domestic investment.....			
Fixed investment.....			
Nonresidential.....			
Structures.....			
Producers' durable equipment.....			
Residential.....			
Nonfarm structures.....			
Farm structures.....			
Producers' durable equipment.....			
Change in business inventories.....			
Nonfarm.....			
Farm.....			
Net exports of goods and services.....			
Exports.....			
Imports.....			
Government purchases of goods and services.....			
Federal.....			
National defense.....			
Nondefense.....			
State and local.....			

METHODOLOGY PAPERS: U.S. National Income and Product Accounts



U.S. DEPARTMENT OF COMMERCE
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U.S. DEPARTMENT OF COMMERCE

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Part I.

Introduction

This paper presents the conceptual basis and framework of government transactions in the national income and product accounts (NIPA's), describes the presentation of the estimates, and describes the sources and methods used to prepare annual, quarterly, and monthly estimates of government transactions. Part I, the introduction, discusses the recording of government transactions in the NIPA's and the relation of the NIPA measures of government receipts and expenditures to analogous measures from government financial statements. It also defines the measures of government transactions that appear in the NIPA tables and indicates the tables in which they can be found. Parts II and III describe in detail the sources and methods used in the derivation of Federal Government transactions and of State and local government transactions, respectively.

Conceptual Basis and Framework

As described in "An Introduction to National Economic Accounting" in the March 1985 SURVEY OF CURRENT BUSINESS, the national economic accounts can be viewed as aggregations of accounts belonging to the individual transactors in the economy.¹ The basic approach used in national economic accounting is (1) to group into sectors economic transactors engaged in the same types of transactions and affected by, and responding to, economic developments in a similar manner and (2) to set up uniform types of accounts that show the broad categories of economic transactions in which these sectors engage. Four sectors are commonly distinguished: Business, household, government, and foreign. For each sector, a set of three accounts is created: A production account, which records the production attributable to that sector; an appropriation account, which records the sources of the sector's income, its current outlays, and its saving; and a saving-investment account, which records the sector's gross saving, net increase in assets, and net increase in liabilities. Taken together, these sector accounts constitute a double-entry system in which an outlay

recorded in one account for one sector is also recorded as a receipt in another account, either for the same sector or for another sector.

The NIPA's, which are designed to display the value and composition of national output and the distribution of incomes generated in its production, are a combination of the sector accounts just described. In summary form, the U.S. NIPA's consist of five accounts: (1) The national income and product (NIP) account, which is a consolidation of the four sector production accounts and the business appropriation account; (2) the personal income and outlay account, which is the household appropriation account; (3) the government receipts and expenditures account, which is the government appropriation account; (4) the foreign transactions account, which is a consolidation of the foreign appropriation account and the foreign saving-investment account; and (5) the gross saving and investment account, which is a consolidation of the saving-investment accounts of the business, household, and government sectors. The five accounts, with entries for 1982, are shown in table I-1.

Recording of government transactions in the NIPA's: Overview

Government consists of those bodies and units, supported mainly by taxes, that implement public policy. The government receipts and expenditures account, shown as account 3 in the five-account summary, records transactions of government with other U.S. residents and with foreigners. On the left side, the transactions are the several categories of government expenditures and saving, where saving is the surplus or deficit. On the right side, the transactions are government receipts, including taxes and contributions to social insurance funds, such as social security.

Each entry in the government receipts and expenditures account has a counterentry in one of the other accounts. (In table I-1, the numbers in parentheses following the entries identify the account and line number of the counterentries.) The government receipts and expenditures entries in account 3 and their counterentries are shown in boldface in the discussion that follows.

The NIP account.—Transactions between government and the other sectors enter the NIP account through the production accounts of the business and government sectors. The business production account

1. This article, by Allan H. Young and Helen Stone Tice, is reprinted as Methodology Paper Series MP-1 (Washington, DC: U.S. Government Printing Office, March 1985).

Table I-1.—Summary National Income and Product Accounts, 1982

[Billions of dollars]
Account 1.—National Income and Product Account

Line		Line	
1	Compensation of employees.....	27	Personal consumption expenditures (2-3).....
2	Wages and salaries.....	28	Durable goods.....
3	Disbursements (2-7).....	29	Nondurable goods.....
4	Wage accruals less disbursements (3-12) and (5-4).....	30	Services.....
5	Supplements to wages and salaries.....	31	Gross private domestic investment (5-1).....
6	Employer contributions for social insurance (3-20).....	32	Fixed investment.....
7	Other labor income (2-8).....	33	Nonresidential.....
8	Proprietors' income with inventory valuation and capital consumption adjustments (2-9).....	34	Structures.....
9	Rental income of persons with capital consumption adjustment (2-10).....	35	Producers' durable equipment.....
10	Corporate profits with inventory valuation and capital consumption adjustments.....	36	Residential.....
11	Profits before tax.....	37	Change in business inventories.....
12	Profits tax liability (3-17).....	38	Net exports of goods and services.....
13	Profits after tax.....	39	Exports (4-1).....
14	Dividends (2-12).....	40	Imports (4-3).....
15	Undistributed profits (5-6).....	41	Government purchases of goods and services (3-1).....
16	Inventory valuation adjustment (5-7).....	42	Federal.....
17	Capital consumption adjustment (5-8).....	43	National defense.....
18	Net interest (2-15).....	44	Nondefense.....
19	National income.....	45	State and local.....
20	Business transfer payments (2-20).....		
21	Indirect business tax and nontax liability (3-18).....		
22	Less: Subsidies less current surplus of government enterprises (3-11).....		
23	Charges against net national product.....		
24	Capital consumption allowances with capital consumption adjustment (5-9).....		
25	Charges against gross national product.....		
26	Statistical discrepancy (5-12).....		
	GROSS NATIONAL PRODUCT.....		GROSS NATIONAL PRODUCT.....

Account 2.—Personal Income and Outlay Account

1	Personal tax and nontax payments (3-16).....	7	Wage and salary disbursements (1-3).....
2	Personal outlays.....	8	Other labor income (1-7).....
3	Personal consumption expenditures (1-27).....	9	Proprietors' income with inventory valuation and capital consumption adjustments (1-8).....
4	Interest paid by consumers to business (2-18).....	10	Rental income of persons with capital consumption adjustment (1-9).....
5	Personal transfer payments to foreigners (net) (4-5).....	11	Personal dividend income.....
6	Personal saving (5-3).....	12	Dividends (1-14).....
		13	Less: dividends received by government (3-10).....
		14	Personal interest income.....
		15	Net interest (1-18).....
		16	Interest paid by government to persons and business (3-7).....
		17	Less: Interest received by government (3-9).....
		18	Interest paid by consumers to business (2-4).....
		19	Transfer payments to persons.....
		20	From business (1-20).....
		21	From government (3-3).....
		22	Less: Personal contributions for social insurance (3-21).....
	PERSONAL TAXES, OUTLAYS, AND SAVING.....		PERSONAL INCOME.....

Table I-1.—Summary National Income and Product Accounts, 1982—Con.

[Billions of dollars]

Account 3.—Government Receipts and Expenditures Account

Line			Line		
1	Purchases of goods and services (1-41)	641.7	16	Personal tax and nontax payments (2-1)	409.3
2	Transfer payments	404.0	17	Corporate profits tax liability (1-12)	63.1
3	To persons (2-21)	396.2	18	Indirect business tax and nontax liability (1-21)	258.8
4	To foreigners (net) (4-6)	7.8	19	Contributions for social insurance	269.6
5	Net interest paid	60.1	20	Employer (1-6)	157.3
6	Interest paid	128.3	21	Personal (2-22)	112.3
7	To persons and business (2-16)	110.0			
8	To foreigners (4-7)	18.3			
9	Less: Interest received by government (2-17)	68.1			
10	Less: Dividends received by government (2-13)	2.9			
11	Subsidies less current surplus of government enterprises (1-22)	8.7			
12	Less: Wage accruals less disbursements (1-4)	0			
13	Surplus or deficit (—), national income and product accounts (5-10)	—110.8			
14	Federal	—145.9			
15	State and local	35.1			
	GOVERNMENT EXPENDITURES AND SURPLUS	1,000.8		GOVERNMENT RECEIPTS	1,000.8

Account 4.—Foreign Transactions Account

1	Exports of goods and services (1-39)	361.9	3	Imports of goods and services (1-40)	335.6
2	Capital grants received by the United States (net) (5-11)	0	4	Transfer payments to foreigners (net)	9.0
			5	From persons (net) (2-5)	1.3
			6	From government (net) (3-4)	7.8
			7	Interest paid by government to foreigners (3-8)	18.3
			8	Net foreign investment (5-2)	—1.0
	RECEIPTS FROM FOREIGNERS	361.9		PAYMENTS TO FOREIGNERS	361.9

Account 5.—Gross Saving and Investment Account

1	Gross private domestic investment (1-31)	447.3	3	Personal saving (2-6)	153.9
2	Net foreign investment (4-8)	—1.0	4	Wage accruals less disbursements (1-4)	0
			5	Undistributed corporate profits with inventory valuation and capital consumption adjustments	20.0
			6	Undistributed corporate profits (1-15)	39.6
			7	Inventory valuation adjustment (1-16)	—10.4
			8	Capital consumption adjustment (1-17)	—9.2
			9	Capital consumption allowances with capital consumption adjustment (1-24)	383.2
			10	Government surplus or deficit (—), national income and product accounts (3-13)	—110.8
			11	Capital grants received by the United States (net) (4-2)	0
			12	Statistical discrepancy (1-26)	—1
	GROSS INVESTMENT	446.3		GROSS SAVING AND STATISTICAL DISCREPANCY	446.3

NOTE.—Numbers in parentheses indicate accounts and items of counterentry in the accounts. For example, the counterentry for wage and salary disbursements, (2-7) is in account 2, line 7.

covers government purchases of goods and nonfactor services from business and the components of factor and nonfactor charges against business product that business pays to government. The government production account covers government purchases of factor services, specifically, the services of government employees.

In the business production account, business output is recorded both in terms of goods and services (on the right side) and in terms of income payments and other costs arising from production (on the left side). Output in terms of goods and services produced is recorded as the sum of purchases by final users—business (on capital account), households (persons), foreigners, and government—plus the change in business inventories. Government purchases of business output is the only one of these entries that is a government transaction. Output in terms of income payments and other costs is recorded as the sum of factor charges—labor and property income—and nonfactor charges. The factor charges that are paid by business to government are **employer contributions for social insurance**, which is a component of business labor cost, and **corporate profits tax liability**, which is shown under corporate profits. The nonfactor charges in which the government is a party to the transaction are **indirect business tax and nontax liability**, **subsidies**, and **current surplus of government enterprises**.

In the government production account, government output also is recorded both in terms of goods and services produced (on the right side) and in terms of income payments and other costs arising from production (on the left side). In both cases, government output is measured by the value of the inputs, exclusively the services of government employees. On the right side of the account, the sale of the services of government employees is entered as a **government purchase** of a factor service; on the left side of the account, the compensation paid to government employees—including **wage accruals less disbursements** and **employer contributions for social insurance**—is entered as a factor cost. Government interest payments, although included elsewhere in the NIPA's, are not considered to be a payment for factor services; they, therefore, are not recorded in the government production account.

The consolidation of the business and government sector production accounts with those for the household and foreign sectors yields a measure of total output, gross national product (GNP) and of the factor and nonfactor charges against GNP. On the right side of the NIP account, **government purchases of goods and services** includes the services of government employees as well as goods and services purchased from business. On the left side, the components of factor and nonfactor charges against GNP include the portions that accrue to government. In addition, **compensation of employees** includes that paid to government employees.

Personal income and outlay account.—This account records the income, outlays, and saving of individuals and the nonprofit institutions serving them. The income that persons receive from government consists of wages and salaries and other labor income paid to government employees, transfer payments, and interest. The outlays that persons make to government are taxes and social insurance contributions. On the left side, the only entry recorded for government transactions is **personal tax and nontax payments**. On the right side, **transfer payments to persons from government** and **interest paid by government to persons and business** are recorded as components of personal income. (Interest paid by government to business is included for computational reasons; it is offset by a negative entry for interest received by business from government in the entry "net interest.") In addition, **personal contributions for social insurance** is deducted on the right side rather than being an entry on the left side. (Dividends and interest received by government are also shown in the personal income and outlay account, but only for the purpose of deriving the entries for personal dividend income and personal interest income.)

Government receipts and expenditures account.—This account records all transactions of government with other U.S. residents and with foreigners. On the left side, these government transactions—**purchases of goods and services**, **transfer payments to persons and to foreigners**, **net interest paid**, **subsidies less current surplus of government enterprises**, and **surplus or deficit (–)**, **national income and product accounts less dividends received by government** and **wage accruals less disbursements**—sum to government expenditures and surplus. On the right side, **personal tax and nontax payments**, **corporate profits tax liability**, **indirect business tax and nontax liability**, and **employer and personal contributions for social insurance** sum to government receipts.

Foreign transactions account.—In this account, both **transfer payments to foreigners from government** and **interest paid by government to foreigners** are components of payments to foreigners, on the right side.

Gross saving and investment account.—In this account, **government surplus or deficit (–)**, **national income and product accounts** is a component of gross saving, on the right side.

Recording of government transactions: Special features

This section provides a more complete description of the recording of several types of government transactions than that provided in the previous section. Specifically, it discusses social insurance funds, government receipts other than taxes and social insurance

contributions, purchases of structures and durable goods by government, and payments of subsidies to business by government. In addition, the treatment of government enterprises, which is not apparent from the entries in the NIPA's, is laid out in detail.

In what follows, it is useful at times to distinguish between government agencies that are part of general government and those that are government enterprises. General government consists of those government agencies that provide goods and services financed largely by taxes and not through normal price transactions. Government enterprises, on the other hand, sell their goods and services directly to the public for a price and recover part or all of their operating costs. The term "government" refers to the sum of general government and government enterprises.

Social insurance funds.—Social insurance funds, which are part of general government, are funds administered by Federal and by State and local governments to provide retirement, health, unemployment, disability, and similar benefits to individuals. The main resources of these funds are derived from compulsory payments—called contributions in the NIPA's—by other sectors and other governmental units. The benefits paid from these funds are generally related to the income of individuals from employment and/or to the contributions made on their account, whether made by themselves or their employers.

Because most social insurance funds are trust funds with resources that cannot be used for purposes other than those specified by statute or trust agreement, contributions to these funds are not classified as taxes in the NIPA's. Similarly, because individuals have no choice in the disposition of this part of their labor income, personal contributions are not included in personal income. In addition, the excess of contributions to these funds and their investment earnings over the benefits paid by them is part of the saving of general government, although the saving of social insurance funds is distinguished and recorded separately. (This treatment contrasts with that of private retirement plans, where the saving of these plans is part of personal saving.)

Receipts other than taxes and social insurance contributions.—Most government receipts are compulsory payments by other sectors—taxes and social insurance contributions—that are not directly related to a specific good or service. Government, however, does receive some revenues from the public that represent payments for goods or services. In the NIPA's, some of these revenues are called "nontax payments" and treated as if they were taxes, others are called government sales and deducted from government purchases, and still others are called enterprise revenue and accounted for in the treatment of government enterprises described below.

A payment will be treated as a nontax and included in government receipts if it is for a good or

service that is administrative or regulatory in nature or for a good or service (such as education or hospitals) that frequently is provided in the private sector by a nonprofit institution. Examples of nontaxes include fines, fees paid for U.S. Department of Agriculture meat and poultry inspection, and tuition paid to State universities.

A payment will be treated as a sale by general government and deducted from government purchases if it is for a good or service that is similar to those sold by private business, but the provision of the good or service is ancillary to the primary function of the government unit. Examples of government sales include school lunch sales and charges for the services of U.S. Department of Agriculture meat graders and fees received by the National Aeronautics and Space Administration for launching services.

A payment will be treated as enterprise revenue if it is for a good or service that is similar to those sold by private business, the provision of the good or service is the primary function of the government unit, and such payments cover a substantial part of the operating costs of the government unit providing the good or service. Examples of enterprise revenue include charges for electricity generated by municipally owned utilities and sales of stamps by the U.S. Postal Service.

The treatment of nontaxes extends the definition of government receipts to include, in addition to compulsory payments, payments by other sectors for goods and services unlike those sold by business. The treatment of government sales preserves this notion of government receipts; in addition, recording government sales as negative purchases allows the other expenditure components in the NIP account to include business-like goods and services sold by government as well as those produced by business. For example, school district purchases of food for student meals from business are recorded in government purchases; the subsequent sale of school lunches is recorded in personal consumption expenditures, and a corresponding deduction is entered in government purchases. Substantially the same result is obtained from the treatment of government enterprises described below.

Purchases of structures and durable goods by government.—In the NIPA's, there is no capital accounting for government. All goods and services purchased by government are treated in the same way—that is, as if consumed in the period in which purchased. Government purchases, therefore, make no distinction between consumption and investment; structures and durable goods purchased by government, which would be classified as investment if purchased by business, are recorded on current account. No charges for the use of capital are recorded in the government production account; the entries for interest and for capital consumption allowances on the left side of the NIP account contain entries only for domestic business (and for the rest of the world, in the case of interest). Finally, gross investment in the gross

saving and investment account includes only private domestic and net foreign investment, and government saving—that is, the surplus or deficit—includes only saving in financial form.

Subsidies.—Subsidies are monetary payments by government to business that enable goods or services to be sold at prices below the factor cost of production, which is defined to include a normal return on capital employed. These payments are included in business income from current production. Subsidies have been used to keep down prices of particular goods and services to consumers, to assist producers to meet competition from imported goods, or to maintain the existence of particular industries. In the NIP account, subsidies are deducted from the sum of factor costs so that output measured on the left side in terms of income payments and other costs arising from production is valued at market prices and, therefore, is equal to output measured on the right side in terms of goods and services, also valued at market prices.

Government enterprises.—Government enterprises are government agencies that cover a substantial proportion of their operating costs by selling goods and services to the public and that maintain their own separate accounts. A “mixed” treatment of government enterprises is used in the NIPA’s, in which some types of transactions are recorded as if they were part of the general government sector and others as if they were part of the business sector. This treatment is designed to provide a consolidated surplus or deficit for the government sector—which includes the surplus or deficit of enterprises—that is useful for many types of economic analysis and to combine the output of government enterprises with that of business firms in the business sector.

Government enterprises are treated like other businesses and included in the NIPA business sector in that (1) their sales to final users are recorded in the business production account; (2) their outlays for materials and business services are considered intermediate rather than final and, therefore, are eliminated in the consolidation of the business sector production account; and (3) both their wage, salary, and other compensation payments and their income are considered charges against business product rather than charges against government product. Within the business sector, government enterprises are classified as noncorporate business. This classification determines how their income is recorded. Specifically, for noncorporate business, none of the owner’s net income is shown as saving in the business sector; all saving is consolidated with that of the owning sector. For a government enterprise, this means that the saving is consolidated with that of its owner, general government. (For other noncorporate business, such as sole proprietorships and partnerships, the saving is consolidated with that of households.)

Government enterprises are treated like other government agencies and included in the NIPA govern-

ment sector in that (1) their interest payments are combined with those of general government rather than those of business; (2) their purchases of equipment and structures and their inventory change are combined with general government purchases rather than with business purchases in gross private domestic investment; and (3) as a consequence of (2), no entries are recorded for depreciation charges and other charges for the use of capital.

The current surplus of government enterprises is the profit-like income of these businesses that accrues to general government. The surplus, however, may not be an accurate measure of factor cost; an enterprise may follow a policy of setting prices at a level at which the proceeds will not cover the full cost of current production. Consequently, this income is considered to be a nonfactor charge against gross product rather than a factor charge. (It is included in charges against GNP but not in national income.)

In recording the current surplus of government enterprises and subsidy payments to business as nonfactor charges in the NIP account, the two entries are combined. The current surplus of government enterprises is subtracted from subsidies, and the combined entry “subsidies less current surplus of government enterprises” is entered with a negative sign to remove subsidies from charges against GNP and to add the current surplus of government enterprises to charges against GNP. In addition, since the same public purpose can be served either by a direct subsidy or by government enterprise sales at a below-market price, combining the two entries gives a measure that is the same, regardless of how policy is implemented.

Government enterprises: An illustration.—Table I-2 shows how the transactions of government enterprises are recorded in the NIPA’s. This table shows the economic accounts for a government enterprise and, for comparison, shows the same accounts for a private corporation and for general government, which owns the government enterprise.

For the private corporation, the economic accounts are the production, the appropriation, and the saving-investment accounts. For the government enterprise, the economic accounts are the production and the appropriation accounts. The production account of the government enterprise is similar to that of the private corporation except that (1) charges against output exclude capital consumption allowances and interest paid and received and (2) the item “profits” in the business production account is replaced by the entry “current surplus.” The appropriation account of the government enterprise is very different from that of the private corporation, however, because the current surplus is transferred to general government. The enterprise does not have a separate saving-investment account.

For general government, the existence of its enterprise is not reflected in the production account; as in the government sector production account mentioned

Table I-2.—Economic Accounts for Three Entities

Private Corporation		Government Enterprise		General Government	
Production Account		Production Account		Production Account	
Wages and salaries Contributions for social insurance Indirect taxes Capital consumption allowances Interest paid Less: Interest received Profits Less: Subsidies	Change in inventories Sales Less: Purchased materials and services	Wages and salaries Contributions for social insurance Indirect taxes Current surplus	Change in inventories Sales Less: Purchased materials and services	Wages and salaries Contributions for social insurance	Sales to government
Charges against output	Output	Charges against output	Output	Charges against output	Output
Appropriation Account		Appropriation Account		Appropriation Account	
Profits taxes Dividends paid Less: Dividends received Undistributed profits	Profits	Transfer of surplus to government	Surplus	Purchases From business Enterprise Inventories Fixed investment Other From government Transfer payments Interest paid Subsidies Less: Surplus of government enterprises Surplus or deficit (-), NIPA's	Indirect business taxes Profits taxes Personal taxes Interest received Contributions for social insurance
Distribution of profits and saving	Profits	Distribution of current surplus	Current surplus	Government expenditures and surplus or deficit (-)	Government receipts
Saving-Investment Account		Saving-Investment Account		Saving-Investment Account	
Plant and equipment purchases Purchases of land Less: Sales of plant and equipment Less: Sales of land Change in business inventories Net acquisitions of financial assets Less: Net increase in liabilities	Undistributed profits Capital consumption allowances	n.a.	n.a.	Net acquisition of financial assets Less: Net increase in liabilities	Surplus or deficit, NIPA's
Gross investment	Gross saving			Gross investment	Gross saving

n.a. Not applicable.

Note—The illustration in table I-2 is based on the economic accounting framework presented in *An Introduction to National Economic Accounting*, Methodology Paper Series MP-1. The saving-investment accounts, therefore, include entries for certain transactions that are not shown in the NIPA's because they cancel when the accounts of all domestic sectors are consolidated. These transactions are purchases and sales of land (which cancel when the business sector is consolidated), net acquisitions of financial assets, and net increase in liabilities.

earlier, government output is measured by the compensation paid to general government—not government enterprise—employees. The appropriation account reflects the fact that government purchases from business include the change in enterprise inventories and enterprise purchases of plant and equipment. The current surplus of government enterprises is recorded on the left side as a deduction from government expenditures rather than as an addition to receipts. The enterprise surplus is consolidated with the surplus of general government.

Relation of NIPA government receipts and expenditures to financial statements

The government receipts and expenditures account is derived primarily from financial statements for the Federal and the State and local governments; these statements record payments to and from government in a given time period. The focus of these statements is the summarization of individual government financial transactions—taxing, spending, borrowing, and lending—into statistics useful for the conduct of government. These financial statements differ from those required for the NIPA's in several respects: The coverage of both transactors and transactions, the extent to which transactions are shown net or gross, the fiscal years used, and the timing with which transactions are recorded. Consequently, several types of adjustment are necessary to conform these financial statements to the NIPA concepts. Also, for some State and local government transactions, data from other sources are substituted for that from the financial statements because they are consistent with estimates of similar transactions elsewhere in the NIPA's, they provide more detail on types of transactions, or they provide monthly or quarterly observations that permit a more precise assignment of transactions to a given time period.

Coverage.—Coverage adjustments are required for two categories of transactors in the Federal Government accounts. (1) Federal financial statements include transactions with residents of the U.S. territories and Puerto Rico as U.S. residents; NIPA government transactions do not include them. (2) From time to time, generally under provisions of law, Federal financial statements exclude certain entities that perform governmental functions; the NIPA's include the receipts and expenditures of these entities in order to provide a comprehensive and consistent measure of government activity.

Coverage adjustments are required for three categories of transactions. (1) Financial statements include transactions in financial assets and transactions in land, including oil bonuses—that is, payments for drilling rights on public land that are capitalized by business; the NIPA's exclude these transactions.

(2) State and local financial statements classify unemployment insurance as a State program; in the NIPA's it is classified as a Federal program. (3) Financial statements include only actual transactions; the NIPA's also include certain imputed transactions.

Netting and grossing.—Netting and grossing adjustments are required because, in financial statements, certain transactions are either recorded in a way that is not consistent with the NIPA classifications or not recorded at all. Because the same amount is added to or subtracted from both receipts and expenditures from financial statements, these adjustments have no effect on the surplus or deficit, but they make NIPA receipts and expenditures differ from their counterparts in financial statements.

These adjustments are necessary for three reasons. (1) Financial statements net some revenue items against expenditures that the NIPA's classify as receipts; an example of such grossing adjustments is medicare (supplementary medical insurance) premiums. (2) Financial statements classify some revenue items as receipts that the NIPA's net against expenditures; examples of netting adjustments are the windfall profit tax on Federal sales of crude petroleum from Federal land and local government school lunch sales. (3) Financial statements reflect only transactions between government and other sectors, eliminating transactions between parts of the same level of government. The NIPA's show some of these transactions on a gross basis, however, by means of a grossing adjustment. For example, employer contributions made by government as employer to government employee retirement systems at the same level of government are considered intragovernmental expenditures and excluded from both receipts and expenditures in financial statements; in the NIPA's, however, both a receipt and a payment are recorded—the payment as a component of compensation of employees in the government production account and the receipt as part of the revenue of social insurance funds in the government income and outlay account.

Fiscal year.—Financial statements for State and local governments report data on a fiscal year basis that is not uniform for all governments. In the NIPA's, these reported data are placed on a calendar year basis and on a common fiscal year basis.

Timing.—Financial statements for government generally record receipts and expenditures on a cash basis: Receipts are recorded when payments are received by government, and expenditures are recorded when checks are issued by government. The only exception is interest on the public debt, which is recorded on an accrual basis—that is, when the liability is incurred. In the NIPA's, the timing basis for government transactions with other sectors maintains consistency with the timing basis used for the other transactions of these sectors. Thus, receipts from business generally

are recorded on a liability, or accrual, basis; purchases of goods and services from business are recorded on a delivery basis, that is, when the goods or services are delivered to government. Net interest paid, nonfarm subsidies, and current surplus of government enterprises are recorded on an accrual basis. Receipts from persons and transfer payments to persons are recorded on a cash basis. Farm subsidies are also on a cash basis.

Definitions

Government consists of those bodies and units, supported mainly by taxes, that implement public policy through the provision of services and the redistribution of resources. The governmental structure of the United States includes the Federal Government, the governments of the fifty States, and local governments.

The Federal Government consists of the executive and legislative branches, and the Judiciary. The executive branch comprises the Office of the President, the executive departments, and a number of independent agencies, smaller offices, and the trust funds that some of them administer. Federally sponsored credit agencies are not included. These specialized lending institutions, such as the Federal National Mortgage Association and the Federal home loan banks, were originally created and owned by the Government but are now privately owned.

State and local governments comprise all political subdivisions of the United States, including the trust funds and enterprises that some of them administer. Local governments consist of counties, municipalities, townships, school districts, numerous kinds of "special districts," and the District of Columbia.

Until now, this paper has referred to personal tax and nontax *payments*, corporate profits tax *liability*, and indirect business tax and nontax *liability* because the perspective used in the five-account summary presentation is that of the taxpayer. In the definitions that follow and in the remainder of this paper, the names of these three categories of taxes are replaced by terms that reflect the perspective of the government accounts—that is, personal tax and nontax *receipts*, corporate profits tax *accruals*, and indirect business tax and nontax *accruals*, respectively.

The definitions are in the order shown in the summary government receipts and expenditures table (NIPA table 3.1). Because that table is a consolidation of the Federal Government and of the State and local governments, an entry for Federal grants-in-aid does not appear. These grants are defined last.

Personal tax and nontax receipts: Tax payments by persons that are not chargeable to business expense and certain other personal payments to government agencies (except government enterprises) that are treated like taxes. Personal taxes include taxes on income, including realized net capital gains; on transfers of estates and gifts; and

on personal property. Nontaxes include tuitions and fees paid to schools and hospitals operated by government; fees, fines, and forfeitures; and donations. Personal contributions for social insurance are not included.

Corporate profits tax accruals: The sum of Federal, State, and local income taxes on all corporate earnings, including realized net capital gains. These taxes are net of refunds and applicable tax credits.

Indirect business tax and nontax accruals: Tax liabilities that are chargeable to business expense in the calculation of profit-type incomes and certain other business liabilities to government agencies (except government enterprises) that are treated like taxes. Indirect business taxes include taxes on sales, property, and production. Employer contributions for social insurance are not included. Taxes on corporate incomes are not included; these taxes cannot be calculated until profits are known, and in that sense they are not a business expense. Nontaxes include regulatory and inspection fees, special assessments, fines and forfeitures, rents and royalties, and donations.

Contributions for social insurance: Employer and personal contributions for social insurance. Employer contributions include employer payments under the following programs: Old-age, survivors, and disability insurance (social security); hospital insurance; unemployment insurance; government employee retirement; railroad retirement; military medical insurance; and publicly administered workers' compensation. Personal contributions include payments by employees, the self-employed, and other individuals who participate in the following programs: Old-age, survivors, and disability insurance (social security); hospital insurance; supplementary medical insurance; unemployment insurance; government employee retirement; railroad retirement insurance; veterans life insurance; and temporary disability insurance.

Government purchases of goods and services: Purchases from business (including net purchases of used goods), compensation of government employees, and purchases from foreigners. The change in inventories and purchases of plant and equipment by government enterprises are included, but their current-account purchases are not. Purchases, a category of expenditures, does not include transfer payments, interest paid by government, and subsidies. (These are separate categories of expenditures.) Transactions in financial assets and land are not included in either purchases or expenditures.

Transfer payments to persons: Income payments to persons for which they do not render current services. Transfer payments include benefits from the social insurance funds and payments under

certain other programs. Included are old-age, survivors, and disability insurance (social security); hospital insurance; supplementary medical insurance; medicaid; unemployment insurance; government employee retirement; workers' compensation; veterans benefits; food stamps; black lung; supplemental security income; and public assistance. Government payments to nonprofit institutions, other than for work under research and development contracts, are also included.

Transfer payments to foreigners: U.S. Government nonmilitary grants to foreign governments in cash and in kind and U.S. Government transfer payments, mainly retirement benefits, to former residents of the United States.

Net interest paid: Interest paid to persons and business and to foreign businesses, governments, and persons, less interest received from business and from foreigners. Interest paid consists of monetary interest paid on public debt and other financial obligations. Interest received consists of monetary and imputed interest received on loans and investments, including the balances of State and local social insurance funds.

Dividends received: Dividends received by State and local general government, primarily by their social insurance funds.

Subsidies less current surplus of government enterprises: Subsidies are the monetary grants paid by government to business, including government enterprises at another level of government. The current surplus of government enterprises is their current operating revenue and subsidies received from other levels of government less their current expenses. In the calculation of their current surplus, no deduction is made for depreciation charges and net interest paid. The current surplus of government enterprises is not counted as a profit-type income and, accordingly, not as a factor charge. Subsidies and current surplus are shown as a combined entry because deficits incurred by government enterprises may result from selling goods to business at below-market prices in lieu of giving them subsidies.

Wage accruals less disbursements: Wages and salaries earned less wages and salaries paid. This difference occurs when there are retroactive changes in wages and salaries; it is subtracted in deriving total government expenditures, which reflect wages and salaries on a cash basis.

Surplus or deficit (-), national income and product accounts: The sum of government receipts less the sum of government expenditures. It may also be viewed as the sum of net acquisitions of financial assets by government and government

enterprises and net government purchases of land and of rights to government-owned land including oil resources, less net borrowing. The surplus or deficit of social insurance funds is shown separately.

Federal grants-in-aid: Net payments from the Federal Government to State and local governments to help finance State and local government activities in areas such as public assistance, highway construction, and education.

Presentation of the Estimates

NIPA tables

The estimates of government transactions are published in the NIPA tables, which appear in the SURVEY (and reference volumes cited therein). Table I-3 indicates the location, by NIPA table number, of the various annual and quarterly estimates of government transactions and, where applicable, of estimates in constant dollars and the corresponding price indexes. Annual estimates generally cover 1929 to the present; quarterly estimates in current dollars generally cover the first quarter of 1946 to the present; and quarterly estimates in constant dollars generally cover the first quarter of 1947 to the present.

In addition to the NIPA tables, additional detail on government transactions within the NIPA framework is presented in several special articles annually in the SURVEY. These include "Federal Fiscal Programs," generally in the February SURVEY, and "Receipts and Expenditures of State Governments and of Local Governments." Other SURVEY articles on government transactions are listed in appendix I-A.

Schedule

With two exceptions, the advance quarterly NIPA estimates of government transactions are prepared in the first month after the end of the quarter, revised a month later (the preliminary estimates), and revised again the following month (the final estimates). The exceptions are corporate profits tax liability, total receipts, and the government surplus or deficit, for which no advance estimates are prepared because of lags in the availability of information on corporate profits. No further revisions are made in the quarterly estimates until the annual revisions, which usually occur each July and cover the 3 most recent years. Following the third annual revision, no further revisions are made in the estimates until the comprehensive revisions, which usually occur every 5 years.

Table I-3.—Location of Government Transactions in the NIPA Tables

Item	Total	Federal	State and local
Current-dollar estimates			
Receipts	3.1*	3.2, 9.3†	3.3, 9.4†
Personal tax and nontax receipts ¹	2.1, 2.7, 3.1*, 3.4*, 8.9*	3.2, 3.4*, 9.3†	3.3, 3.4*, 9.4†
By category		3.2, 3.4*	3.3, 3.4*
Corporate profits tax accruals ¹	1.14, 1.16, 3.1*, 6.20B*, 8.13*, 9.6	3.2, 9.3†	3.3, 9.4†
Indirect business tax and nontax accruals ¹	1.9, 1.21* (farm), 1.23* (housing), 3.1*, 3.5*, 8.9*	3.2, 3.5*, 9.3†	3.3, 3.5*, 9.4†
By category		3.2, 3.5*	3.3, 3.5*
Contributions for social insurance	1.9, 3.1*, 3.6*	3.2, 3.13*, 9.3†	3.3, 3.13*, 9.4†
Employer contributions	1.14, 3.6*, 6.12*, 8.5*, 8.9*	3.6*, 3.13*	3.6*, 3.13*
By category of social insurance fund	8.5*	3.6*, 8.9*	3.6*
Personal contributions	2.1, 2.6, 3.6*, 8.14*	3.6*, 3.13*	3.6*, 3.13*
By category of social insurance fund		3.6*	3.6*
Federal grants-in-aid			3.3, 9.4†
Expenditures	3.1*	3.2, 9.3†	3.3, 9.4†
By type and/or function	3.14*	3.15*	3.16*
Purchases of goods and services	1.1, 1.17 (autos), 1.19 (trucks), 3.1*, 3.7B, 8.1, 8.9*, 9.1†	1.1, 3.2, 3.7B, 3.9 (defense), 8.1, 9.1†, 9.3†	1.1, 3.3, 3.7B, 8.1, 9.1†, 9.4†
Durable goods		3.7B, 3.9 (defense)	3.7B
By category		3.9 (defense)	
Nondurable goods		3.7B, 3.9 (defense)	3.7B
By category		3.9 (defense)	
Services		3.7B, 3.9 (defense)	3.7B
Compensation of employees	1.15*, 3.1*, 6.4B*	3.7B, 3.9 (defense), 6.4B*	3.3, 3.7B, 6.4B*
Wages and salaries	1.14, 1.15*, 2.1, 2.6, 6.5B*, 6.8B* (per empl.)	6.5B*, 6.8B* (per empl.)	6.5B*, 6.8B* (per empl.)
Supplements to wages and salaries	1.15*		
By type		8.5*	8.5*
Employer contributions for social insurance	(see receipts)	(see receipts)	(see receipts)
Other labor income	6.13*		
Other services		3.7B, 3.9 (defense)	3.7B
By category		3.9 (defense)	
Structures	5.4* ²	3.7B, 3.9 (defense)	3.7B
By type	5.4* ²		
Transfer payments	3.1*	3.2, 9.3†	
To persons	1.9, 3.1*, 3.1*, 8.9*	3.2, 3.11*, 3.13*, 9.3†	3.3, 3.11*, 3.13*, 9.4†
By category	2.1	3.11*	3.11*
To foreigners	3.1*, 4.1, 9.5†	3.2, 9.3†	
Grants-in-aid to State and local governments		3.2, 9.3†	
Net interest paid	3.1*, 3.14*	3.2, 9.3†	3.3, 9.4†
Interest paid	3.1*, 8.8*	3.2, 8.8*, 9.3†	3.3, 8.8*, 9.4†
To persons and business	3.1*, 8.8*	3.2, 9.3†	
To foreigners	3.1*, 4.1, 4.5*, 9.5†	3.2, 8.8*, 9.3†	
Less: Interest received by government	3.1*, 8.8*, 8.9*	3.2, 8.8*, 9.3†	3.3, 8.8*, 9.4†
Less: Dividends received by government	3.1*, 8.7*		3.3, 8.7*, 9.4†
Subsidies less current surplus of government enterprises	1.9, 1.23* (housing), 3.1*, 3.12*, 8.9*	3.2, 3.12*, 9.3†	3.3, 3.12*, 9.4†
Subsidies	1.21* (farm), 3.1*, 8.9* (nonfarm housing)	3.2, 3.12*, 9.3†	3.3, 3.12*, 9.4†
By category		3.12*	
Current surplus of government enterprises	3.1*	3.2, 3.12*, 9.3†	3.3, 3.12*, 9.4†
By category		3.12*	3.12*
Less: Wage accruals less disbursements	1.9, 3.1*	3.2, 9.3†	3.3, 9.4†
Surplus or deficit (-), national income and product accounts	3.1*, 5.1	3.2, 5.1, 9.3†	3.3, 5.1, 9.4†
Social insurance funds	3.1*	3.2	3.3
Other	3.1*	3.2	3.3
Social insurance funds receipts and expenditures		3.13*	3.13*
Relation of NIPA estimates to source data		3.17B, 3.19*	3.18*
Employment:			
Number of employees	6.6B*, 6.7B*	6.6B*, 6.7B*	6.6B*, 6.7B*
Persons engaged in production	6.10B*	6.10B*	6.10B*
Hours worked by employees	6.11*		
Gross national product originating in government	1.7, 6.1*	1.7, 6.1*	1.7, 6.1*
Net national product originating in government	1.12*		
National income originating in government	1.12*, 1.15*, 6.3B*		

See footnotes at end of table.

Table I-3.—Location of Government Transactions in the NIPA Tables—Continued

Item	Total	Federal	State and local
Constant-dollar estimates			
Purchases of goods and services.....	1.2, 1.18 (autos), 1.20 (trucks), 3.8B, 8.1 (defense), 8.1	1.2, 3.8B, 3.10	1.2, 3.8B, 8.1
Durable goods		3.8B, 3.10 (defense)	3.8B
By category		3.10	
Nondurable goods		3.8B, 3.10 (defense)	3.8B
By category		3.10	
Services		3.8B, 3.10 (defense)	3.8B
Compensation of employees		3.8B, 3.10 (defense)	3.8B
Other services		3.8B, 3.10 (defense)	3.8B
Structures	5.5* ²	3.8B, 3.10 (defense)	3.8B
By type	5.5* ²		
Gross national product originating in government.....	1.8, 6.2*	1.8, 6.2*	1.8, 6.2*
Net national product originating in government.....	1.13*		
National income originating in government.....	1.13*		
Price indexes			
Purchases of goods and services.....	7.1, 7.4‡, 7.16, 8.1	7.1, 7.4‡, 7.16, 8.1	7.1, 7.4‡, 7.16, 8.1
Durable goods		7.16, 7.17 (defense)	7.16
By category		7.17	
Nondurable goods		7.16, 7.17 (defense)	7.16
By category		7.17	
Services		7.16, 7.17 (defense)	7.16
Compensation of employees		7.16, 7.17 (defense)	7.16
Other services		7.16, 7.17 (defense)	7.16
By category		7.17	
Structures	7.12* ²	7.16, 7.17 (defense)	7.16
By type	7.12* ²		
Gross national product originating in government.....	7.6‡	7.6‡	7.6‡

* Annual estimates only.

‡ Quarterly, not seasonally adjusted estimates only.

‡ Implicit price deflator.

1. In tables where perspective is that of the taxpayer rather than government, receipts are shown as payments and accruals are shown as liabilities.

2. In these tables, purchases of structures include compensation of government employees engaged in new force-account construction. In other tables showing government purchases, this compensation is classified as a service and is included as part of government compensation of employees.

Notes.—(1) Except as noted, these tables contain both annual estimates and quarterly estimates seasonally adjusted at annual rates. (2) Except as noted, price indexes are fixed-weighted price indexes with 1982 weights. (3) Tables 3.7, 3.8, 3.17, 6.4–6.10, and 6.14–6.24 are published in two parts: 3.7A and 3.8A (for 1929–71), 3.17A (for 1952–67), 6.4A–6.10A, 6.14A, and 6.19A (for 1929–48), and 6.15A–6.18A and 6.20A–6.24A (for 1929–47); and 3.7B and 3.8B (for 1972 and later years), 3.17B (for 1968 and later years), 6.4B–6.10B, 6.14B, and 6.19B (for 1949 and later years), and 6.15B–6.18B and 6.20B–6.24B (for 1948 and later years).

Appendix I-A

Articles Related to Government Transactions

The following is a list of selected articles related to government transactions that have appeared in the SURVEY OF CURRENT BUSINESS in the last decade.

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| "Federal Farm Programs for 1986-90." April 1986 (pages 31-35). | Includes a discussion of the national income and product account treatment of the Commodity Credit Corporation. |
| "Federal Fiscal Programs." February 1988 (pages 19-24). | Presents the annual "translation" of the Federal budget receipts and expenditures into the national income and product account estimates. |
| "Federal Personal Income Taxes: Liabilities and Payments, 1977-81." January 1983 (pages 27-30). | Presents Federal personal income taxes on a liability basis and compares them with the payments basis used in the accounts; includes a brief methodology. Subsequently updated. |
| "Implicit Price Deflators for Military Construction." November 1983 (pages 14-18). | Discusses construction prices in general and the development of price indexes for military construction. |
| "Special Note.—National Defense Purchases." November 1982 (pages 4-6). | Discusses the various measures of spending—expenditures, purchases, and outlays—for national defense, focusing on the defense buildup in the early 1980's; includes some methodology. |
| "National Defense Purchases: A Review of Appropriations and Real Purchases." November 1984 (pages 11-16). | Reviews the national defense appropriations and constant-dollar buildup in terms of both budget national defense purchases of goods and services. |
| "Receipts and Expenditures of State Governments and of Local Governments: Revised and Updated Estimates, 1984-87." September 1988 (pages 23-25). | Presents a deconsolidation of the receipts and expenditures account for State and local governments into separate accounts for the two levels of government. |
| "Sources of Change in Federal Government Transfer Payments to Persons, 1970-81." October 1982 (pages 25-32). | Discusses the growth in the level and relative size of transfer payments to persons in terms of three major sources: (1) automatic cyclical effects, (2) automatic inflation effects, and (3) legislation and other sources. |

"Sources of Change in the Federal Government Deficit, 1970-86." May 1985 (pages 25-32).

Discusses the change in the Federal deficit (on the national income and product accounting basis) by examining trends in receipts and expenditures, their composition, and their automatic responsiveness to the business cycle and inflation.

"Sources of Growth in Selected State Local Government Tax Receipts." February 1982 (pages 15-18).

Discusses the growth of selected tax receipts in terms of legislative actions, on the one hand, and events outside the reach of legislative actions (mainly economic activity and inflation), on the other.

"Tax Reform Act of 1986." March 1987 (pages 18-25).

Presents a brief history of Federal tax legislation in the 1980's and discusses in detail the provisions of the Tax Reform Act of 1986. Presents the impact of those provision on a national income and product accounting basis.

"The State and Local Government Fiscal Position: An Alternative Measure." March 1984 (pages 23-25).

Discusses the characteristics of the State and local government surplus or deficit on the national income and product account basis that must be considered when using it to analyze the fiscal position of these governments and presents an alternative measure of the fiscal position. Subsequently updated.

Part II.

Federal Government Transactions

Overview of Estimating Procedures

The NIPA estimates of Federal Government receipts and expenditures are based on the Federal budget, published by the Office of Management and Budget (OMB), on financial reports published by the Department of the Treasury, and on reports of other Federal Government agencies.

The budget is published as a set of documents, including the *Budget of the United States Government (Budget)* [4A-1], the *Budget of the United States Government: Appendix (Budget: Appendix)* [4A-2], and the *Budget of the United States Government: Special Analyses (Special Analyses)* [4A-3]. The Treasury also prepares a set of documents, including the *United States Government Annual Report: Appendix* [80], *Monthly Treasury Statement of Receipts and Outlays of the United States Government (MTS)* [77], and the *Treasury Bulletin* [78]. The appendixes to the budget and to the Treasury's annual report provide the most detailed and complete fiscal year data on receipts, outlays, balances, and other cash-basis information covering all Federal Government entities. (The data from the OMB and Treasury documents will be referred to collectively as "budget data" when the context is a general description of methodology.) The documents are keyed to the fiscal year, which begins on October 1, ends the following September 30, and is designated by the calendar year in which it ends.

Tables II-1 and II-2 show the relation of receipts and outlays in the Federal budget to NIPA estimates of receipts and expenditures. The tables are regroupings, with detail by major receipt category or agency, of NIPA table 3.17B. The first column shows receipts by category or outlays by agency as shown in the budget. The next several columns show the differences between the budget data and NIPA estimates, and the remaining columns show the estimates of total NIPA receipts or expenditures and the distribution of the totals among NIPA categories.

Tables II-1 and II-2 have two major roles at different points in the cycle of estimating NIPA receipts and expenditures. In their first role, the tables provide a structured format for the "translation" of the Fed-

eral budget into the NIPA receipts and expenditures. This translation—which is based largely on data from the Budget—provides a framework, or a benchmark, for the current quarterly estimates. For example, the translation of the fiscal year 1989 budget as it was transmitted to Congress in early 1988 provided various expenditures relationships for fiscal years 1988 and 1989 (discussed in detail later) needed to prepare the current quarterly estimates for calendar year 1988.

In their second role, the tables provide the same structured format for the fiscal year analysis carried out after the fiscal year is over. While this role is similar to the first role, the analysis of receipts and expenditures is much more detailed, the data are actual rather than budget estimates, and the source data—especially for receipts—are different than those used in the budget translation. This fiscal year analysis provides the framework for the quarterly estimates prepared for annual revisions, which usually occur each July. For example, the 1987 fiscal year analysis provided the basis for the estimates prepared as part of the July 1988 revision.

As used in both roles, the tables also provide a reconciliation between the NIPA estimates and the budget. The total receipts and expenditures of the Federal Government are known, and the NIPA estimates must reconcile to the budget totals.

Differences between receipts

Columns 2–6 in table II-1 show the differences in coverage, netting and grossing, and timing between receipts in the budget and NIPA receipts.

Coverage of transactors.—The budget includes receipts from persons in the U.S. territories (including American Samoa, Guam, and the Virgin Islands of the United States) and the Commonwealth of Puerto Rico. In the NIPA's, residents of the U.S. territories and Puerto Rico are considered residents of the rest of the world, rather than U.S. residents. The receipts, largely contributions for social insurance, are not, however, treated as receipts from the rest-of-the-world sector; instead, they are excluded from the NIPA's.

The budget does not include receipts of certain entities that are part of the NIPA government sector. These receipts include those of the Tennessee Valley

Table II-1.—Relation of Federal Government Receipts in the National Income and Product Accounts to the Budget, Fiscal Year 1982

[Billions of dollars]

Line	Budget category	Budget receipts	Coverage differences			Plus: Netting and grossing differences	Plus: Timing differences	Equals: Federal Government receipts, national income and product accounts				
			Transactors		Transactions			Total	Personal tax and nontax receipts	Corporate profits tax accruals	Indirect business tax and nontax accruals	Contributions for social insurance
			Less: U.S. territories and Puerto Rico	Plus: Receipts of entities not in budget								
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Individual income taxes	298.1	0	0	0	-0.6	4.5	302.0	302.0	0	0	0
2	Corporation income taxes.....	49.2	0	0	0	-1.2	-11.2	36.8	0	36.8	0	0
	Social insurance taxes and contributions:											
3	Social security trust funds.....	177.5	1.0	0	0	2.0	-1.8	176.7	-.3	0	0	177.0
4	Railroad retirement accounts	3.2	0	0	0	0	-.1	3.2	0	0	0	3.2
5	Unemployment insurance.....	16.2	.2	0	0	0	.4	16.5	0	0	0	16.5
6	Federal employees retirement contributions	4.1	0	0	0	0	0	4.1	0	0	0	4.1
7	Other retirement contributions.....	.1	0	0	0	0	0	.1	0	0	0	.1
8	Excise taxes.....	36.3	0	0	0	0	-.7	35.6	.1	0	35.5	0
9	Estate and gift taxes.....	8.0	0	0	0	0	0	8.0	8.0	0	0	0
10	Customs duties.....	8.9	0	0	0	0	0	8.9	0	0	8.9	0
	Miscellaneous receipts:											
11	Deposits of earnings by Federal Reserve banks ..	15.2	0	0	0	0	.1	15.3	0	15.3	0	0
12	All other.....	1.0	.1	0	0	0	0	.9	.2	0	.7	0
13	Subtotal.....	617.8	1.2	0	0	.2	-8.8	607.9	310.0	52.1	45.0	200.8
	Not allocated to budget categories:											
14	Receipts of entities not in budget.....	0	0	-2	0	0	0	-.2	0	0	-.3	.1
15	Imputations.....	0	0	0	16.9	0	0	16.9	0	0	0	16.9
	Receipts from budget expenditures:											
16	Employer contributions for employee retirement..	0	0	0	0	8.7	0	8.7	0	0	0	8.7
17	Medicare insurance premiums	0	0	0	0	3.9	0	3.8	0	0	0	3.8
18	Other.....	0	0	0	0	5.9	.2	6.1	.1	0	5.3	.8
19	Total.....	617.8	1.2	-2	16.9	18.7	-8.6	643.3	310.0	52.1	50.0	231.1

Table II-2.—Relation of Federal Government Expenditures in the National Income and Product Accounts to the Budget, Fiscal Year 1982

(Billions of dollars)

Line	Agency	Budget out- lays	Coverage differences						Plus: Netting and gross- ing differences	Plus: Timing differences	Less: Intra- gov- ern- mental trans- actions	Equals: Federal government expenditures, national income and product accounts ¹							
			Transactors		Transactions							Total	Purchases of goods and services		Transfer payments		Grants- in-aid to State and local gov- ern- ments	Net inter- est paid	Subsid- ies less current surplus of gov- ern- ment enter- prises
			Less: U.S. terri- tories and Puerto Rico	Plus: Expen- ditures of entities not in budget	Less:	Plus:	De- fense	Nonde- fense					To per- sons	To for- eigners					
															Net lend- ing	Net pur- chases of land				Other financial transac- tions ^{2}	Impu- tations
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1	Legislative Branch	1.4	0	0	0	0	0	0	0	0	0	1.4	0	1.4	0	0	0	0	0
2	The Judiciary .....	.7	0	0	0	0	0	0	0	0	0	.7	0	.7	0	0	0	0	0
3	Executive Office of the President .....	.1	0	0	0	0	0	0	0	0	0	.1	0	.1	0	0	0	0	0
4	Funds Appropriated to the President	6.1	0	0	1.8	0	.7	0	0	.1	0	3.6	.3	0	0	3.7	.4	-.9	0
5	Department of Agriculture	36.2	1.3	0	-.4	0	-.1	0	.2	-.8	.5	34.4	0	12.9	9.6	.6	5.2	.6	5.5
6	Department of Commerce	2.0	0	0	.1	0	0	0	.1	0	0	2.0	0	1.5	0	0	.5	-.1	0
7	Department of Defense—Military	182.9	.1	0	0	0	0	0	.1	-.6	0	182.2	166.3	0	15.8	.1	.2	0	-.3
8	Department of Defense—Civil	3.0	0	0	0	0	0	0	0	0	0	3.0	0	3.0	0	0	-.1	0	0
9	Department of Education	14.1	.2	0	.4	0	0	0	0	0	.1	13.4	0	.8	5.0	0	7.7	-.1	0
10	Department of Energy	7.7	0	0	0	0	0	0	-.5	.1	.1	7.2	3.3	2.4	0	0	1.8	0	-.3
11	Department of Health and Human Services.	251.3	1.8	0	0	0	0	0	3.9	0	.1	253.2	0	8.7	207.6	1.0	35.8	0	0
12	Department of Housing and Urban Development.	14.5	.3	0	.5	0	1.3	0	0	.1	1.6	10.9	0	.5	0	0	4.2	-.9	7.1
13	Department of the Interior	3.8	.2	0	0	.2	0	0	1.6	0	-.1	5.1	0	3.8	.1	.2	1.3	-.2	0
14	Department of Justice	2.6	0	0	0	0	0	0	0	0	0	2.6	0	2.4	0	0	.2	0	0
15	Department of Labor	30.7	.3	0	0	0	0	0	0	.1	.3	30.2	0	1.9	22.9	0	5.3	0	.2
16	Department of State	2.2	0	0	0	0	0	0	.1	0	0	2.3	0	1.1	.2	1.0	0	0	0
17	Department of Transportation	19.9	.1	0	.7	0	0	0	0	.1	.2	19.1	0	5.3	.4	0	10.8	0	2.5
18	Department of the Treasury	110.5	.3	0	-.1	0	-.8	0	-1.6	0	-15.8	125.4	0	4.2	1.2	0	4.6	115.4	0
19	Environmental Protection Agency	5.0	.1	0	0	0	0	0	0	0	0	4.9	0	.9	0	0	4.0	0	0
20	General Services Administration .....	.2	0	0	0	0	0	0	0	0	0	.3	0	.2	0	0	0	.1	0
21	National Aeronautics and Space Administration.	6.0	0	0	0	0	0	0	0	0	0	6.0	0	5.9	0	0	.1	0	0
22	Office of Personnel Management	20.0	.1	0	0	0	-.5	0	3.4	0	0	23.9	1.8	2.3	19.2	.1	0	0	.4
23	Veterans' Administration	23.9	.3	0	-.1	0	0	0	.5	0	0	24.4	0	8.1	16.2	.2	.1	-.3	0
24	Other independent agencies	12.9	0	0	2.1	0	0	0	0	.2	1.2	9.7	.2	4.5	6.4	0	1.3	-.8	-1.9
25	Undistributed offsetting receipts: Employer share, employee retirement.	-7.0	0	0	0	0	0	0	6.2	0	-.9	0	0	0	0	0	0	0	0
26	Interest received by trust funds	-16.0	0	0	0	0	0	0	0	0	0	-16.0	0	0	0	0	0	-16.0	0
27	Other	-6.2	0	0	0	-2.4	0	0	3.6	0	-.3	0	0	0	0	0	0	0	0
28	Subtotal	728.4	5.0	0	5.1	-2.2	.5	0	17.6	-.8	-12.9	749.9	172.0	72.7	304.7	7.1	83.4	96.8	13.2
	Not allocated to agencies:																		
29	Expenditures of entities not in budget.	0	0	17.2	14.3	0	0	0	1.1	-1.8	12.9	-10.8	0	3.4	.1	0	0	-14.2	-.1
30	Imputations	0	0	0	0	0	0	16.9	0	0	0	16.9	15.4	1.0	.9	0	0	-.4	0
31	Total	728.4	5.0	17.2	19.4	-2.2	.5	16.9	18.7	-2.6	0	755.9	187.3	77.1	305.6	7.2	83.4	82.2	13.0

1. Also includes "Less: Wage accruals less disbursements," which were -\$16 million in 1982.

2. Includes capital gains and losses, and transactions of certain Federal employee benefit funds.

Authority retirement fund, the Federal Reserve Board retirement fund, and several deposit funds held by the Treasury.

Coverage of transactions.—The budget refers to actual transactions; the NIPA's include imputations. In receipts, imputations are made for the Federal Government's contributions as an employer to the following programs: Military retirement, workers' compensation, military medical insurance, unemployment insurance for former Federal employees, and several small unfunded Federal retirement programs. (In each case, an equal imputation is made in expenditures; the surplus or deficit is not affected.)¹

Netting and grossing.—The "netting and grossing differences" in table II-1 reflects three kinds of differences in the way a transaction is recorded. For all three, the surplus or deficit is not affected because equal adjustments are made in receipts and expenditures.

First, the budget nets certain receipts against outlays, and the NIPA's record a receipt. This difference occurs, for example, in the case of medicare supplementary medical insurance premiums, where the premiums are netted against outlays in the budget. The budget's netting reflects the view that the proceeds are income from a business-type transaction and are thus not included in receipts. The NIPA's record a contribution for social insurance. The grossing adjustments raise NIPA receipts and expenditures relative to their budget counterparts.

Second, in some cases the budget records a receipt, and the NIPA's record an offset against expenditures. This difference occurs, for example, in the case of the windfall profit tax on Federal sales of crude petroleum; the taxes are recorded in the budget as excise taxes, but they are netted against expenditures in the NIPA's. The netting adjustments lower NIPA receipts and expenditures relative to their budget counterparts.

Third, for some transactions between agencies, the budget does not record a receipt; instead, it records an outlay and an offset against outlays. The NIPA's record both an expenditure and a receipt. This difference in recording occurs for contributions made by the Federal Government to social insurance funds for Federal employees. In the budget, each agency records its outlays for this purpose and then, before total outlays are calculated, the employer contributions are subtracted as an "undistributed offsetting receipt." This offsetting pair of entries reflects the budget view of these transactions as intragovernmental transactions. The grossing adjustments in receipts and in expenditures raise the NIPA measures relative to their budget counterparts.

Timing.—Receipts are recorded in the budget on a cash—that is, when-received—basis. NIPA receipts

are recorded on either a payments—that is, when-paid—basis or on an accrual basis. In general, the NIPA's record receipts from the personal sector on a payments basis and from the business sector on an accrual basis. Consequently, personal taxes and non-taxes and personal contributions for social insurance are recorded on a payments basis. Corporate profits taxes, indirect business taxes and nontaxes, and employer contributions for social insurance are recorded on an accrual basis. Because of lags between when a liability (accrual) is incurred or a payment is made and when the payment is received, receipts recorded in the budget for one period may be after the period needed for the NIPA's.

Differences between outlays and expenditures

Columns 2-9 in table II-2 show the differences in coverage, netting and grossing, and timing between outlays in the budget and NIPA expenditures. Column 10, as will be explained, ensures that all transactions between agencies have been accounted for.

Coverage of transactors.—A geographic difference of the same type as discussed for receipts exists for expenditures. In principle, the expenditures that are excluded from the NIPA's—largely transfer payments, grants-in-aid, and subsidies to U.S. territories and Puerto Rico—could be treated as payments to the rest-of-the-world sector; however, this treatment is not implemented.

In addition, differences relating to a number of other transactors existed prior to 1986. Various entities were considered "off-budget" under provisions of law. For example, the Federal Financing Bank, the Postal Service, the Synthetic Fuels Corporation, and the lending activities of the Rural Electrification Administration were off-budget until their status changed in 1986.²

Coverage of transactions.—The budget includes net lending (new loans less repayments) and net transactions in land (purchases less sales) as outlays. (Bonuses paid from drilling rights on the Outer Continental Shelf are considered sales of land.) NIPA expenditures do not include these transactions because they are an exchange of existing assets rather than current income or production. In addition, the budget includes certain other financial transactions such as capital gains and losses of the Exchange Stabilization Fund; the NIPA's do not include them.

As explained in describing the differences between budget and NIPA receipts, the budget refers to actual transactions and does not include imputations. The column labeled "imputations" in table II-2 accounts for the imputations discussed under receipts; tables

1. In NIPA table 3.17B, these imputations are included as a netting and grossing difference.

2. The Balanced Budget and Emergency Deficit Control Act of 1985—better known as the Gramm-Rudman-Hollings Act—places social security "off-budget" to exempt social security from sequestration. Social security, however, is included in the budget for purposes of estimating the deficit.

II-1 and II-2 show identical amounts for these adjustments. In addition, expenditures include imputations for services furnished without payment by depository institutions (that is, financial intermediaries except life insurance carriers and private noninsured pension funds), food furnished to employees, and standard clothing issued to military personnel. These three imputations, however, do not affect total expenditures because an offsetting imputation is also made. For example, in the case of the imputation for services by depository institutions, an imputed purchase of services offsets an imputation for interest received from the deposits. In the cases of food and clothing, the imputation included in compensation of employees (in purchases) offsets an imputed offsetting sale by the government (also in purchases).

Netting and grossing.—These differences were discussed under receipts. Tables II-1 and II-2 show identical amounts for this adjustment.

Timing.—The budget records outlays, except interest on the public debt, on a cash—that is, when-paid—basis; interest on the public debt is on an accrual basis. In the NIPA's, expenditures are to be recorded as follows:

Expenditure category	Timing basis
Purchases:	
Compensation	accrual
Other	delivery
Transfer payments	payment
Grants-in-aid	payment
Net interest paid	accrual
Subsidies:	
Agricultural	payment
Other	accrual
Current surplus of government enterprises	accrual

For purchases other than compensation, as the timing basis implies, the NIPA's record the expenditure when the goods or services are delivered rather than when they are paid for.

In table II-2, the difference labeled "timing" occurs in purchases, certain subsidies, and the current surplus of government enterprises. The largest timing difference is for national defense purchases. This difference usually involves long-term production items, such as missiles and aircraft, for which the work in progress is considered as part of business inventories until the item is completed and delivered to the Government.

Intragovernmental transactions.—The budget records certain transactions as an expenditure of one agency and as a receipt deducted from the expenditures of the receiving agency. For example, agencies pay interest to the Department of the Treasury as the result of their borrowing from the Treasury. This column in table II-2 is not, therefore, a difference between NIPA expenditures and the budget; instead, it ensures

that all intragovernmental transactions have been accounted for in an agency-by-agency derivation of NIPA expenditures.

Derivation of receipts

Receipts estimates are prepared by kind-of-receipt category as shown in the budget. For most categories, the estimates are not based directly on budget data; instead, to achieve the required timing basis, they are based largely on other information from Federal agencies. The most widely used source of other information is from tabulations of tax returns prepared by the Internal Revenue Service (IRS) and other administering agencies. For example, tabulations of corporate income tax returns are used in the derivation of corporate profits tax accruals; tabulations of excise tax returns are used in the derivation of excise taxes; and tabulations of returns filed by employers for many social insurance programs, such as social security, are used in the derivation of contributions for social insurance. Budget data are used for personal tax and nontax receipts (including estate and gift taxes), for customs duties, and for smaller social insurance programs, such as supplementary medical insurance. In addition, imputed NIPA receipts, such as employer contributions for military retirement, are prepared in conjunction with the expenditure estimates.

Budget data are available monthly, usually in the MTS [77]; tax return data are available quarterly for certain taxes, such as excise taxes, and for the calendar year for other taxes, such as corporate taxes. These data—which are available in time for the first July revision—are used to prepare quarterly—and for some receipts, monthly—not seasonally adjusted estimates; for taxes for which only annual data are available, the quarterly and monthly not seasonally adjusted estimates are derived by interpolation. The quarterly not seasonally adjusted estimates are summed to obtain calendar year estimates. For estimates that show seasonality, the Census X-11 seasonal adjustment procedure is usually used.

Current quarterly and monthly estimates for most receipts are extrapolations of the most recent data using NIPA income estimates and other relevant data as indicators. For the rest, such as nonwithheld income taxes and nontaxes, the estimates are judgmental extrapolations.

Derivation of expenditures

Expenditure estimates are prepared by program—that is, by activity for which there is a line item in the budget, of which about 570 are analyzed separately for the NIPA estimates. These analyses draw on data from the Budget and related documents supplemented by data from Treasury financial reports and reports of the agencies administering the programs. For most programs, the fiscal year analysis begins by adjusting budget outlays for coverage and for netting and gross-

Table II-3.—Special Supplemental Food Program: Fiscal Year Analysis

[Millions of dollars]

Line		Fiscal year 1982	1981	1982			Source
			IV	I	II	III	
1	Budget outlays	929.8	191.7	242.0	248.0	248.1	MTS.
2	Less: U.S. territories	25.1	5.2	6.5	6.7	6.7	Federal Aid to States, Fiscal Year 1982 (Treasury).
3	Equals: Total NIPA expenditures.	904.7	186.5	235.5	241.3	241.4	
4	Less: Grants-in-aid to State and local governments.	881.0	181.6	229.3	235.0	235.1	Unpublished detail supporting Budget of the United States Government: Special Analyses, Fiscal Year 1984. Adjusted for grants to territories.
5	Equals: Nondefense purchases.	23.7	4.9	6.2	6.3	6.3	

ing differences between these outlays and NIPA expenditures. The expenditures total (as adjusted) for a program is then classified by type of NIPA expenditure—that is, transfer payments, interest paid, etc.—with nondefense purchases determined residually.

This procedure is illustrated in table II-3, using the Department of Agriculture's special supplemental food program. As shown in the table, *Budget* outlays were \$929.8 million for fiscal year 1982. A Treasury report, *Federal Aid to States* [75], showed that \$25.1 million was paid to U.S. territories, which are excluded from the NIPA's, as grants-in-aid. Thus, total NIPA expenditures were \$904.7 million. Unpublished budget data from OMB show that \$881.0 million was grants-in-aid to State and local governments. Because budget descriptions of the program did not indicate any other types of expenditure, the remaining \$23.7 million was recorded as nondefense purchases of goods and services.

When a fiscal year analysis is completed, that detailed array of NIPA expenditures by program and by type of expenditure serves as a set of control totals for the quarterly estimates. The method most frequently used to derive quarterly estimates by type of expenditure for a program is to prorate the quarterly *MTS* outlays by the fiscal year relationships developed for that program. For example, in table II-3, grants-in-aid for the fiscal year are 94.8 percent of outlays. That percentage is applied to each quarter of the fiscal year to estimate quarterly grants-in-aid; nondefense purchases are the residual. Proration is not used when outlays are dominated by a fluctuating element, such as lending, that is not included in the NIPA's or when information that is a significant improvement over proration, such as for the Commodity Credit Corporation (CCC), is available from the operating agency. In the first case, the NIPA expenditure estimates are judgmental extrapolations. In the second case, a de-

tailed analysis is performed using the agency data to derive the NIPA estimates.

With few exceptions, the data for a fiscal year analysis are available in time for the first July revision. For quarterly estimates that show seasonality, the Census X-11 seasonal adjustment procedure is usually used.

For the current quarterly estimates, the advance estimates of nondefense purchases except the CCC are based on 2 months of *MTS* outlays in conjunction with relationships derived in the fiscal year analysis; 3 months of *MTS* outlays are available for the preliminary and final estimates. Parts of the advance estimate of defense purchases are extrapolations using *MTS* outlays, other indicators, or judgment; the other parts are based on data underlying the budget and agency data. By the final estimate, the bulk of defense purchases except compensation is based on agency data. CCC inventory change is based on agency data supplemented by judgment. For transfer payments, most advance estimates are judgmental extrapolations; by the preliminary and final estimates, some data become available. For grants-in-aid, *MTS* outlays are used in the same way as for most nondefense purchases. For net interest, subsidies, and the current surplus, the estimates are largely judgmental extrapolations.

Constant-dollar estimates of purchases

Constant-dollar estimates of purchases of goods and services are prepared either by deflation, by extrapolation of base-year values, or by direct pricing. The data used for deflation include information on prices paid by the Federal Government, producer and consumer price indexes published by the Bureau of Labor Statistics (BLS) [59, 62], construction cost indexes compiled by the Census Bureau [37], agricultural prices from the Department of Agriculture [22, 26], and average hourly earnings from BLS [60]. Employment data are used to extrapolate base-year compensation and services furnished without payment by depository institutions. Quantities of agricultural commodities, certain petroleum transactions, and a variety of military goods and some services are directly priced.

Derivation of Receipts

The NIPA categories of Federal receipts, as indicated earlier, are derived from budget data and other information from Federal agencies as part of the fiscal year analysis. These data are adjusted for coverage and for netting and grossing differences, as shown in table II-1, to put them on a basis consistent with NIPA concepts. The sources and methods used to derive NIPA receipts yield the required timing basis; the timing difference shown in table II-1 is calculated as

the difference between budget receipts and NIPA receipts.

Within the control totals derived from the fiscal year analysis, estimates of receipts are prepared using the sources shown in table II-4. The table shows, for detailed receipts categories, the source data for the first July revision and for the current estimates. The column for the first July revision describes calendar year and quarterly estimates. The column for current estimates describes quarterly estimates for all the receipts categories and monthly estimates for those in the personal income and outlay account. When the source data are listed as monthly, it is to be assumed that monthly estimates are summed to quarterly and calendar year estimates. Similarly, when the source data are listed as quarterly, it is to be assumed that the quarterly estimates are summed to calendar year estimates. When the source data are listed as annual (either calendar or fiscal year), the method used to obtain quarterly (or monthly) estimates is also listed. The table also indicates the seasonal adjustment procedure.

The seasonally adjusted estimates of receipts are prepared using one of three procedures. For each, the initial effects of tax law changes, when significant, are estimated separately and added to the seasonally adjusted estimates. The three procedures are as follows: (1) For taxes and contributions for which the quarterly (or monthly) pattern of payments or liabilities reflects fluctuations in the tax or contributions base, the seasonally adjusted estimates are prepared by interpolating and extrapolating the annual estimates using a measure of the base as an indicator. An example of the use of this approach is personal withheld income taxes, which are interpolated and extrapolated using as the indicator the monthly seasonally adjusted NIPA wages and salaries less those of farm and private household workers. (2) For taxes or contributions for which the quarterly (or monthly) pattern reflects less specific sources of variation or for which the choice of an indicator is less straightforward, the seasonally adjusted estimates are prepared using the Census X-11 seasonal adjustment procedure to adjust the quarterly (or monthly) data directly. An example of the use of this approach is estate and gift taxes. (3) For taxes for which quarterly (or monthly) observations show no seasonality and for receipts for which there are no quarterly (or monthly) data, the seasonally adjusted estimates are prepared by interpolating the annual estimates without an indicator and extrapolating the current quarterly estimates judgmentally. Examples of the use of this approach are personal nonwithheld income taxes (that is, declarations and final settlements less refunds) and all nontaxes.

Personal tax and nontax receipts

Personal tax and nontax receipts are estimated at the level of detail shown in table II-4.

Income taxes

Income taxes are estimated in two parts: Withheld taxes, and declarations and final settlements less refunds. Withheld income taxes are directly withheld at the source, largely by employers, from wages and salaries. Declarations (that is, estimated tax payments) are paid quarterly, largely on income not subject to withholding. Final settlements are any additional taxes paid with the filing of tax returns and from audits. Refunds are the return to the taxpayer of excess taxes paid, including excess social security contributions for individuals holding more than one job, and any interest paid on the refunds.

Withheld income taxes.—Withheld taxes are from the MTS [77] and are the sum of three pieces: Withheld individual income taxes, withheld social security taxes (including employer taxes), and the employer social security tax for Federal employees (included in undistributed offsetting receipts). Monthly data are summed to derive a quarterly estimate of cash-basis withheld social security and income taxes.

An estimate of combined NIPA social security and income tax payments is derived by lagging approximately 9 percent of each quarter's cash-basis receipts to the prior quarter. The percentage to be lagged is adjusted when legislation changes the payment schedule required of employers.

An estimate of withheld social security taxes is subtracted from the combined estimate to obtain an estimate of NIPA withheld income taxes. The estimate of withheld social security taxes (including those for Federal employees) is from Social Security Administration (SSA) tabulations of tax returns filed by employers [57]. (Until 1987 the MTS data mentioned earlier did not include social security contributions from State and local governments. The data from SSA for years prior to 1987 are adjusted to provide an estimate of contributions conforming to coverage of the MTS.)

The estimate of withheld income taxes is prepared quarterly; quarterly not seasonally adjusted estimates are summed to calendar year estimates.

Monthly and quarterly seasonally adjusted estimates of withheld income taxes are prepared by interpolating the calendar year estimates using NIPA seasonally adjusted wages and salaries less those of farm and private household workers as the indicator. Allowance is made for changes in the withholding rate schedule. Current estimates are extrapolations using the same indicator.

Declarations and final settlements less refunds.—Declarations and final settlements are together often referred to as nonwithheld income taxes. Monthly NIPA nonwithheld taxes are from the MTS [77] and are the sum of three pieces: Other income taxes, presidential election campaign fund collections, and social security taxes under the Self-Employment Contributions Act (SECA). Monthly estimates are summed to obtain quarterly estimates. An

Table II-4.—Federal Government Receipts: Sources of Estimates

Line	Category	Calendar year 1982 (billions of dollars)	Procedure used to prepare seasonally adjusted estimates	First July revision: Quarterly and calendar year estimates ¹	Current quarterly and, when applicable, monthly estimates
1	Receipts	635.3			
2	Personal tax and nontax receipts.	304.5			
3	Income taxes.....	296.5	Interpolated and extrapolated using W&S as indicator.	MTS data less SSA withheld social security.	Extrapolated using W&S as indicator.
4	Withheld.....	265.6			
5	Declarations and final settlements less refunds.	30.9	Interpolated without indicator and extrapolated judgmentally.	MTS data less SSA nonwithheld social security and IRS refunds.	Extrapolated judgmentally, guided by budget projection.
6	Estate and gift taxes	7.6	Multiplicative X-11 for quarters and interpolated without indicator for months.	MTS gross receipts less IRS refunds.	MTS, when available, and DTS.
7	Nontaxes ².....	.3	Interpolated without indicator and extrapolated judgmentally.	Budget data; FY estimates interpolated using MTS receipts as indicator or interpolated without indicator.	Extrapolated judgmentally, guided by budget projection.
8	Corporate profits tax accruals ...	49.0			
9	Federal Reserve banks.....	15.2	See corporate profits methodology paper.	See corporate profits methodology paper.	See corporate profits methodology paper.
10	Other	33.8	See corporate profits methodology paper.	See corporate profits methodology paper.	See corporate profits methodology paper.
11	Indirect business tax and nontax accruals.	48.1			
12	Excise taxes	32.7	Multiplicative X-11; interpolated without indicator or extrapolated judgmentally.	IRS FY receipts, interpolated using withdrawals from bonded warehouses.	Extrapolated using withdrawals, when available, or judgmentally.
13	Alcohol.....	5.4			
14	Tobacco	2.5	Multiplicative X-11	IRS FY receipts, interpolated using withdrawals from bonded warehouses.	Extrapolated using withdrawals, when available, or judgmentally.
15	Windfall profit tax.....	15.7	NSA = SA	SOI liabilities.....	No taxes are currently paid.
16	Gasoline.....	4.1	Multiplicative X-11	IRS quarterly liabilities; calendar year interpolated using DOE gasoline production as indicator.	Extrapolated using DOE gasoline production as indicator.
17	Telephone and telegraph.....	.6	Interpolated using personal consumption expenditures for telephone services as indicator.	IRS quarterly liabilities.....	Extrapolated using personal consumption expenditures for telephone services as indicator.
18	Coal .....	.5	NSA = SA	IRS quarterly liabilities.....	Extrapolated judgmentally.
19	Nuclear fuel		NSA = SA	Unpublished detail supporting the MTS.	Unpublished detail supporting the MTS, when available, and extrapolated judgmentally.
20	Diesel fuel.....	.6	NSA = SA	IRS quarterly liabilities.....	Extrapolated judgmentally.
21	Air transport.....	1.4	NSA = SA	IRS quarterly liabilities.....	Extrapolated judgmentally.
22	Other ³	2.0	Interpolated without indicator and extrapolated judgmentally.	IRS quarterly liabilities.....	Extrapolated judgmentally.
23	Customs duties	8.6	Multiplicative X-11	MTS receipts	MTS, when available, and DTS.
24	Nontaxes ⁴	6.8	Interpolated without indicator and extrapolated judgmentally.	Budget data; FY estimates interpolated using MTS receipts as indicator or interpolated without indicator.	Extrapolated judgmentally, guided by budget projection.
25	Contributions for social insurance.	233.7			
26	Employer contributions.....	130.8	Interpolated and extrapolated using W&S as indicator.	SSA quarterly taxable W&S multiplied by tax rate.	Extrapolated using W&S as indicator.
27	Old-age, survivors, disability, and hospital insurance.	86.0			
28	Old-age, survivors, and disability insurance.	69.2			
29	Hospital insurance.....	16.8		SSA quarterly taxable W&S multiplied by tax rate for those covered by OASDI.	

Table II-4.—Federal Government Receipts: Sources of Estimates—Continued

Line	Category	Calendar year 1982 (billions of dollars)	Procedure used to prepare seasonally adjusted estimates	First July revision: Quarterly and calendar year estimates ¹	Current quarterly and, when applicable, monthly estimates
30	Unemployment insurance	17.0	Interpolated and extrapolated using W&S as indicator.	UIS collections, lagged.....	Extrapolated using W&S as indicator.
31	State tax	12.8			
32	Federal tax	3.7	Interpolated and extrapolated using W&S as indicator.	UIS annual taxable wages, multiplied by tax rates; interpolated over quarters using State unemployment insurance taxable wages.	Extrapolated using W&S as indicator.
33	Railroad employees .....	.2	Interpolated and extrapolated using W&S as indicator.	RRB annual taxable wages, multiplied by tax rate; interpolated over quarters using MTS receipts.	Extrapolated using W&S as indicator.
34	Federal employees.....	.3	Imputation using benefits; see table II-5.	Imputation using benefits; see table II-5.	Imputation using benefits; see table II-5.
35	Federal employee retirement..	24.3	Regular: Interpolated and extrapolated using W&S as indicator; Additional: NSA = SA.	Regular: MTS receipts; Additional: OPM contributions.	Regular: Extrapolated using W&S as indicator; Additional: Extrapolated judgmentally, guided by budget projection.
36	Civilian.....	9.0			
37	Military	15.4	Imputation using benefits; see table II-5.	Imputation using benefits; see table II-5.	Imputation using benefits; see table II-5.
38	Railroad retirement	2.0	Interpolated and extrapolated using W&S as indicator.	Regular: RRB annual taxable wages, multiplied by tax rate; Supplemental: FY receipts adjusted to annual estimate. Total interpolated over quarters based on MTS receipts.	Extrapolated using W&S as indicator.
39	Veterans life insurance	0	Interpolated without indicator and extrapolated judgmentally.	VA financial reports	Extrapolated judgmentally.
40	Workers' compensation .....	.9	Imputation using benefits; see table II-5.	Imputation using benefits; see table II-5.	Imputation using benefits; see table II-5.
41	Military medical insurance .....	.5	Imputation using benefits; see table II-5.	Imputation using benefits; see table II-5.	Imputation using benefits; see table II-5.
42	Personal contributions.....	102.9	Interpolated and extrapolated using W&S as indicator.	SSA quarterly taxable W&S multiplied by tax rate.	Extrapolated using W&S as indicator.
43	Old-age, survivors, disability, and hospital insurance.	92.9			
44	Employees	86.1	Calendar year divided by 12	SSA quarterly taxable W&S multiplied by tax rate for those covered by OASDI.	Extrapolated judgmentally, guided by budget projection.
45	Old-age, survivors, and disability insurance..	69.3			
46	Hospital insurance	16.9	Calendar year divided by 12	SSA annual taxable earnings multiplied by tax rate and allocated to quarter of payment.	Extrapolated judgmentally, guided by budget projection.
47	Self-employed	6.8			
48	Supplementary medical insurance.	3.9	Interpolated without indicator and extrapolated judgmentally.	MTS receipts	Extrapolated judgmentally, guided by budget projection.
49	State unemployment insurance.	.1	Interpolated and extrapolated using W&S as indicator.	UIS taxable earnings from States, multiplied by tax rate.	Extrapolated using W&S as indicator.
50	Federal civilian employee retirement.	4.3	Interpolated and extrapolated using W&S as indicator.	MTS receipts	Extrapolated using W&S as indicator.
51	Railroad retirement .....	.8	Interpolated and extrapolated using W&S as indicator.	RRB annual taxable wages, multiplied by tax rate; interpolated over quarters using MTS receipts.	Extrapolated using W&S as indicator.
52	Veterans life insurance .....	.7	Interpolated without indicator and extrapolated judgmentally.	VA premium payments	Extrapolated judgmentally.

1. Except as noted, the estimates for later revisions have the same sources.

2. Includes passport and immigration fees, certain other fees, fines, migratory bird-hunting stamps, and gifts to U.S. government funds.

3. Includes the use tax on certain vehicles and excise taxes on trucks, buses, trailers, tires, inner tubes, tread rubber, certain sporting goods, firearms, production of the chemical and oil industries ("Superfund"), and wagering.

4. Includes royalties from petroleum production on the Outer Continental Shelf, other royalties, rents, fees to various regulatory agencies, fines, penalties, forfeitures, and donations to government funds.

DOE U.S. Department of Energy.
DTS Daily Treasury Statement.IRS
MTS
NSA
RRB
SA
SOI
SSA
UIS
VA
W&S
X-11

Internal Revenue Service, U.S. Department of the Treasury.

Monthly Treasury Statement.

Not seasonally adjusted.

Railroad Retirement Board.

Seasonally adjusted.

Statistics of Income Bulletin.

Social Security Administration, U.S. Department of Health and Human Services.

Unemployment Insurance Service, U.S. Department of Labor.

Veterans' Administration.

Wages and salaries.

Census Bureau seasonal adjustment procedure.

estimate of SECA taxes based on tax return tabulations from SSA [57] is subtracted from the combined estimate. An excise tax on private foundations—a tax on the income of such institutions—is then added; the tax on private foundations is based on collections reported in IRS excise tax data [81]. The resulting quarterly not seasonally adjusted estimates are summed to obtain calendar year estimates of nonwithheld income taxes.

The IRS provides monthly data for refunds of income taxes and excess social security withholdings [82]; these data differ from the *MTS* data because they include interest on refunds. Monthly data are summed to obtain quarterly not seasonally adjusted estimates, and the latter are summed to obtain calendar year estimates.

For the monthly and quarterly seasonally adjusted estimates, the combined estimate of declarations and settlements less refunds is interpolated without an indicator, with allowance for tax law changes. Current estimates are judgmental extrapolations guided by budget projections, with allowance for tax law changes.

Estate and gift taxes

Estate and gift taxes (gross) are from the *MTS* [77], and refunds (including interest) are from IRS data [82]. Monthly data are summed to obtain quarterly not seasonally adjusted estimates, and the latter are summed to obtain calendar year estimates.

The gross receipts and refunds are seasonally adjusted separately using the Census X-11 procedure, with allowance for tax law changes. The resulting quarterly series are interpolated over months without an indicator, with allowance for tax law changes.

For the current quarterly estimates, the advance estimate is based on 2 months of data from the *MTS* and a preliminary third-month estimate from the *Daily Treasury Statement (DTS)* [76]. Three months of *MTS* data are available for the preliminary estimate. All monthly estimates are interpolated without an indicator from the quarterly estimates.

Personal nontaxes

Personal nontaxes consist of a wide variety of small payments from individuals to the Federal Government. Among them are passport and immigration fees, fines paid by persons, and migratory bird-hunting stamps.

Nontaxes for the fiscal year are from budget data [4A-2, 79, 80], largely data on miscellaneous receipts and proprietary receipts (which, in the budget data, are offsets to expenditures). For nontaxes included in budget proprietary receipts, the fiscal year estimate is interpolated over quarters using the pattern of the collecting agency's proprietary receipts from the *MTS* as the indicator; for nontaxes included in budget miscellaneous receipts, quarterly estimates are interpolations without an indicator. For the nontaxes not

included in budget proprietary and miscellaneous receipts, quarterly estimates are interpolations without an indicator. Quarterly not seasonally adjusted estimates are summed to obtain calendar year estimates. Monthly and quarterly seasonally adjusted estimates are interpolations without an indicator and, for the current estimates, judgmental extrapolations guided by budget projections.

Corporate profits tax accruals

See *Corporate Profits: Profits Before Tax, Profits Tax Liability, and Dividends*, BEA Methodology Paper Series MP-2 [40], for a discussion of the sources and methods for deriving corporate profits tax accruals.

Indirect business tax and nontax accruals

Excise taxes

Alcohol excise taxes.—The IRS tabulates alcohol excise tax receipts for the fiscal year [81]; these data are used as the NIPA fiscal year estimate. Quarterly not seasonally adjusted estimates are prepared by prorating the fiscal year data using taxable withdrawals from bonded warehouses as the indicator. The withdrawal data are from the Bureau of Alcohol, Tobacco, and Firearms (BATF) [72, 73]. Estimates are prepared separately for domestic distilled spirits, for domestic beer, and for all other categories of alcohol. Quarterly not seasonally adjusted estimates are summed to obtain calendar year estimates. Excise taxes for domestic distilled spirits and for domestic beer are seasonally adjusted using the Census X-11 procedure; for all other alcohol excise taxes, the quarterly seasonally adjusted estimates are interpolations without an indicator. Current quarterly estimates are extrapolations using taxable withdrawals as the indicator, when available, or judgmental extrapolations; data on taxable withdrawals are available 60 days after the end of the month.

Tobacco excise taxes.—The IRS tabulates tobacco excise tax receipts for the fiscal year [81]; these data are used as the NIPA fiscal year estimate. Quarterly not seasonally adjusted estimates are prepared by prorating the fiscal year data using taxable withdrawals of small cigarettes from bonded warehouses as the indicator. The withdrawal data are from the BATF [74]. Quarterly not seasonally adjusted data are summed to obtain calendar year estimates. Quarterly seasonally adjusted estimates are prepared using the Census X-11 procedure. Current quarterly estimates are extrapolations using taxable withdrawals as the indicator, when available, or judgmental extrapolations; data on taxable withdrawals are available 60 days after the end of the month.

Windfall profit tax.—The windfall profit tax, in effect from 1980 to 1988, was a per-barrel tax on petroleum production. The Federal Government also

"taxed" the royalties it received on the production of oil on the Outer Continental Shelf and on sales from the Naval petroleum reserve; these "taxes" are not considered taxes in the NIPA's. In the NIPA's, the windfall profit tax records liabilities only on private and on State and local government petroleum production.

The IRS tabulated the windfall profit tax liability from quarterly tax returns filed by producers [83]. These data, less Federal liability, are used as the NIPA quarterly liability estimate. Quarterly not seasonally adjusted data are used as the seasonally adjusted estimates. Quarterly estimates are summed to obtain calendar year estimates. No taxes are currently paid.

Other excise taxes.—The IRS tabulates liabilities for all of the other types of excise taxes from tax returns that are filed in the quarter following the liability [81]. With two exceptions, the NIPA quarterly not seasonally adjusted estimates are derived by lagging the IRS data one quarter. Refunds, on a cash basis, are from IRS [82] and include interest; they are subtracted from the "other" excise tax category. Quarterly estimates are summed to obtain calendar year estimates. The two exceptions to this procedure are for the excise taxes on gasoline and on nuclear fuel. The quarterly gasoline excise tax is interpolated from the calendar year estimate using data from the Energy Information Administration, Department of Energy (DOE), for gasoline production [53] as the indicator, and the excise tax on nuclear fuel is from unpublished detail supporting the *MTS*.

Quarterly seasonally adjusted estimates of the gasoline excise tax are derived using the Census X-11 procedure. Quarterly seasonally adjusted estimates of the telephone and telegraph excise tax are interpolated from the calendar year estimate using personal consumption expenditures (PCE) for telephone services as the indicator. For most of the other types of excise taxes, quarterly not seasonally adjusted data are used as the seasonally adjusted estimates.

Current quarterly estimates for gasoline excise taxes are extrapolations using DOE gasoline production as the indicator. Telephone and telegraph excise taxes are extrapolations using PCE for telephone services as the indicator. Current quarterly estimates for most of the other types of excise taxes are judgmental extrapolations.

Customs duties

MTS data on gross customs duties less refunds [77] are used as the NIPA liability estimate. Quarterly not seasonally adjusted data are summed to obtain calendar year estimates. Quarterly seasonally adjusted estimates of gross receipts and refunds are prepared using the Census X-11 procedure.

For the current quarterly estimates, the advance estimate is based on 2 months of *MTS* data and a preliminary third month from the *DTS* [76]. Three months of *MTS* data are available for the preliminary estimate.

Indirect business nontaxes

Indirect business nontaxes consist of a wide variety of payments by business to the Federal Government. Among them are royalties from petroleum production on the Outer Continental Shelf and fines.

Nontaxes for the fiscal year are from budget data [4A-2, 79, 80], largely data on miscellaneous receipts and proprietary receipts (which, in the budget data, are offsets to expenditures). For nontaxes included in budget proprietary receipts, the fiscal year estimate is prorated over quarters using the collecting agency's proprietary receipts from the *MTS* as the indicator; for nontaxes included in budget miscellaneous receipts, quarterly estimates are interpolations without an indicator. For most of the nontaxes not included in budget proprietary and miscellaneous receipts, quarterly estimates are interpolations without an indicator. Quarterly not seasonally adjusted estimates are summed to obtain calendar year estimates. Quarterly seasonally adjusted estimates are interpolations without an indicator and, for the current estimates, judgmental extrapolations guided by budget projections.

Contributions for social insurance

Table II-4 lists contributions by program for the various social insurance programs, separately for employer contributions and for personal contributions, as they are shown in NIPA table 3.6. The descriptions that follow are by program only, because the methodology is the same for employer and personal contributions in programs that have both.

Old-age, survivors, and disability insurance (OASDI)

Employer and employee contributions.—The old-age and survivors insurance (OASI) trust fund makes benefit payments to eligible retired workers and to their survivors. The disability insurance (DI) trust fund makes benefit payments to eligible disabled workers. These funds, which are better known as social security, are financed by contributions based on taxable wages and salaries and on the taxable earnings of the self-employed. (Contributions by the self-employed are discussed next.) Workers covered by OASDI are subject to taxes on all wages and salaries until they reach a "maximum taxable earnings" for the year. In most cases, the employer and the employee pay identical taxes into the trust funds. Employees who work for more than one employer may have too much OASDI tax withheld. If the combined earnings from all employers exceed the maximum for the year, the employee is entitled to a refund, which is claimed on the tax return for individual income taxes. Budget data record these refunds as an offset to OASDI taxes; the NIPA's treat the refunds as an offset to personal income taxes. Calendar year data on wages and salaries subject to OASDI taxes are from SSA tabulations of tax returns filed by employers and published in the *So-*

cial Security Bulletin: Annual Statistical Supplement [57]. These data are adjusted to exclude U.S. territories and Puerto Rico, based on data from the same source. The remaining taxable wages and salaries are multiplied by the tax rate (including that for hospital insurance, which is discussed later), separately for the employee and employer, to derive calendar year estimates of OASDI contributions (including those for hospital insurance).

The SSA also provides unpublished calendar year data for tips, which are subject to the employee tax. The estimate of taxable tips is multiplied by that tax rate and added to the employee contributions previously calculated.

The SSA also provides quarterly not seasonally adjusted taxable wages and salaries, which are multiplied, as described for the calendar year data, by the tax rate to derive quarterly not seasonally adjusted OASDI contributions. The calendar year estimate of contributions from the territories and Puerto Rico is interpolated using total quarterly contributions as the indicator. The resulting estimate is subtracted from total OASDI contributions to derive quarterly not seasonally adjusted NIPA contributions (including those for hospital insurance).

Monthly and quarterly seasonally adjusted estimates are interpolations of the calendar year estimates using a seasonally adjusted variant of NIPA wages and salaries as the indicator. The effects of changes in the tax rate and the maximum taxable earnings, which historically have taken effect in January, are estimated separately and added to the seasonally adjusted estimates.

Current monthly and quarterly estimates are extrapolations using the variant of NIPA wages and salaries as the indicator, with allowance for changes in the tax rate or the maximum taxable earnings.

Employer contributions paid by government—which are needed to estimate compensation of government employees, a component of government purchases—are based on SSA unpublished calendar year estimates of taxable wages and salaries for military, Federal civilian, and State and local government employees. The employer contributions are derived by multiplying these wages and salaries by the employer tax rate (including that for hospital insurance). Quarterly and monthly estimates are interpolations without indicator of the calendar year estimates, modified for pay raises and changes in the tax rate or maximum taxable earnings. Employer contributions for military employees are allocated to general government, and contributions for Federal civilian employees are allocated to civilian general government and enterprises by the relationship of wages and salaries in Federal civilian general government and in Federal enterprises. Employer contributions for State and local employees are allocated to general government and enterprises in the same manner using the relationship of State and local wages. Current quarterly and monthly estimates are

judgmental extrapolations using the variant of wages and salaries as the indicator, modified for pay raises and for changes in the tax rate or the maximum taxable earnings.

Self-employed contributions.—The SSA provides calendar year estimates of taxable earnings from self-employment [57], and these are multiplied by the tax rate (including those for hospital insurance). The resulting estimates of contributions are allocated to the quarter of payment. Beginning in 1966, the liability for each year is assumed to be paid as follows: (1) 30 percent in quarterly declarations, with equal payments made in April, June, and September of the tax year and in January of the following year; and (2) 70 percent in final settlements in the following year, with 25 percent of the final settlements in the first quarter and 75 percent in the second quarter. Monthly seasonally adjusted estimates are the calendar year estimate divided by 12. Current monthly estimates are judgmental extrapolations guided by budget projections. Prior to 1966, when the form for estimated income tax payments did not include self-employed contributions, it was assumed that these liabilities were paid with income tax returns in the following year.

Hospital and supplementary medical insurance

The hospital insurance (HI) and the supplementary medical insurance (SMI) trust funds provide what is better known as medicare. HI covers care provided by hospitals, skilled nursing facilities, home health agencies, and hospices and is financed by contributions based on taxable wages and salaries. HI is mandatory for all workers covered by OASDI and for certain groups of workers not covered by OASDI—railroad employees, some Federal civilian employees, and some State and local employees hired after March 1986. SMI, which is optional, covers physician services, hospital outpatient and laboratory services, treatment for end-stage renal disease, and medical equipment. The SMI fund is financed by a monthly premium and by general revenues.

All wages and salaries taxable for OASDI (discussed earlier) are also taxable for HI. Calendar year and quarterly not seasonally adjusted HI contributions are derived using the HI tax rate in the same manner as described for the OASDI estimates. Of the groups of workers not covered by OASDI, the SSA provides calendar year and quarterly not seasonally adjusted estimates of taxable wages and salaries for Federal and for State and local government employees [57]. The quarterly taxable wages and salaries are multiplied by the HI tax rate to obtain quarterly not seasonally adjusted estimates of employer and personal contributions. The Railroad Retirement Board (RRB) provides unpublished calendar year estimates for railroad wages and salaries taxable for HI; the calendar year estimate is divided by four to obtain quarterly not seasonally adjusted estimates.

Monthly and quarterly seasonally adjusted HI contributions for those subject to OASDI taxes are derived in combination with the OASDI estimates described earlier. Monthly and quarterly seasonally adjusted HI contributions for the other groups are prepared by interpolating the calendar year estimates without an indicator and by extrapolating judgmentally. The initial effects of changes in the tax rate or the maximum taxable earnings are estimated separately and added to the seasonally adjusted estimates.

Employer HI contributions paid by government on wages and salaries subject to OASDI taxes—needed to estimate compensation of employees—are estimated using the same methods as the corresponding OASDI contributions discussed earlier. Employer HI contributions for Federal employees not subject to OASDI are allocated to civilian general government and enterprises by the relationship of wages and salaries in Federal civilian general government and in enterprises. Employer contributions for State and local employees not subject to OASDI are allocated in the same manner using the relationship of State and local wages.

Supplementary medical insurance premiums are from the MTS [77]. SSA provides calendar year premiums from U.S. territories and Puerto Rico. These premiums are interpolated over months using total premiums as the indicator and subtracted from total premiums to yield NIPA monthly not seasonally adjusted estimates. The monthly estimates are summed to calendar year estimates.

Monthly and quarterly seasonally adjusted estimates are interpolations of the calendar year estimate without an indicator, allowing for increases in the monthly premium. Current estimates are judgmental extrapolations, guided by budget projections and allowing for increases in the premium.

Unemployment insurance

Contributions to the unemployment insurance trust fund are generated by a State and a Federal tax imposed on wages and salaries paid by most private employers and a special Federal tax for the railroad industry. Most taxes are on employers; a few States tax employees. In the NIPA's, an employer contribution is imputed for unemployed former Federal military and civilian employees.

State unemployment tax.—The State tax consists of (1) taxes paid by most private employers and a few State and local governments on wages and salaries up to a maximum, (2) taxes paid by employees in a few States, and (3) a reimbursement of benefits by certain employers—some State and local governments and some nonprofit organizations—in lieu of paying the regular tax. The maximum taxable earnings varies from State to State, but cannot be lower than the maximum taxable earnings for the Federal tax.

The Unemployment Insurance Service (UIS), Employment and Training Administration, provides un-

published data on quarterly taxes paid; these taxes do not include the reimbursable amounts. The data are lagged one quarter to approximate the liability timing used in the NIPA's and summed to a calendar year estimate. An estimate of taxes paid by employers in the U.S. territories and Puerto Rico, also based on UIS data [63, 65], is subtracted to derive the NIPA estimate. A portion of the NIPA estimate is allocated to personal contributions using information from the States that tax employees. The reimbursable amount is an estimate of reimbursable unemployment insurance benefits discussed in the derivation of expenditures (see page 44).

Quarterly seasonally adjusted estimates of employer contributions are interpolations of the calendar year estimates using seasonally adjusted private wages and salaries less those of railroad, farm, and private household workers as the indicator. The seasonally adjusted reimbursable amount is based on the estimate of the seasonally adjusted reimbursable benefits. The monthly seasonally adjusted estimates of personal contributions are interpolations of the calendar year using the wages and salaries indicator just mentioned. Changes in the tax rate or the maximum taxable earnings, which regularly occur in January, are estimated separately and added to the seasonally adjusted estimates.

Current monthly and quarterly estimates of employer and personal contributions are extrapolations using the private wages and salaries mentioned above as the indicator, with allowance for tax changes. The current estimate of the reimbursable amount is based on the estimate of seasonally adjusted reimbursable benefits.

The regular employer contributions paid by State and local governments—needed to estimate compensation of employees—are based on a BEA tabulation of data from UIS and are allocated between general government and government enterprises by the relationship of State and local wages and salaries in general government and in government enterprises. Most of the reimbursable amount paid by State and local governments is allocated to general government.

Federal unemployment tax.—The Federal unemployment tax has two parts: A national tax at a uniform rate and a State-specific surtax at varying rates. All covered employers are subject to the uniform tax rate. In addition, in some States that have borrowed funds from the Federal Government to finance benefits, covered employers are subject to a surtax that depends on the amount and duration of the State's indebtedness.

Calendar year estimates are based on unpublished taxable wages and salaries, by State, compiled by UIS from annual tax returns filed by employers. The taxable wages and salaries are multiplied by the uniform tax rate and, for States with a surtax, the taxable wages and salaries from that State are multiplied by the surtax rate. Information for the individual State

surtaxes is from UIS. Quarterly not seasonally adjusted estimates are interpolations using wages and salaries taxable for State unemployment insurance as the indicator.

Quarterly seasonally adjusted estimates are interpolations of the calendar year estimates using seasonally adjusted private wages and salaries less those of railroad, farm, and private household workers as the indicator. Current estimates are extrapolations using the same indicator. Changes in the tax rate or the maximum taxable earnings are estimated separately and added to the seasonally adjusted estimates.

Railroad employees.—Calendar year estimates are based on taxable wages and salaries compiled by the RRB [91]. These wages and salaries are multiplied by the Federal railroad unemployment tax rate to derive employer contributions for railroad employees. Quarterly not seasonally adjusted estimates are interpolations using *MTS* receipts [77] for this program as the indicator. Quarterly seasonally adjusted estimates are interpolations and, for the current estimates, extrapolations using seasonally adjusted NIPA railroad wages and salaries as the indicator. Changes in the tax rate or the maximum taxable earnings are estimated separately and added to the seasonally adjusted estimates.

Federal employees.—The estimates of contributions are the equivalent of unemployment benefits for former Federal employees discussed in the derivation of expenditures (see page 44). This imputation is an employer contribution and is allocated to civilian general government and government enterprises by the relationship of wages and salaries in Federal civilian general government and in Federal government enterprises.

Federal employee retirement

Civilian retirement.—Federal civilian retirement contributions are made to the following: The civil service retirement and disability fund, the foreign service retirement and disability fund, the judicial survivors fund, the Federal Reserve Board fund, and the Tennessee Valley Authority (TVA) program. In addition, contributions, equivalent to retirement benefits, are imputed for the following: Former commissioned officers of the Public Health Service, retired Federal judges, former lighthouse service personnel and survivors, and certain former employees of the National Oceanic and Atmospheric Administration.

Calendar year and quarterly not seasonally adjusted estimates of employer and employee regular contributions to the civil service fund are from the *MTS* [77]. Additional employer contributions, due at the end of the fiscal year to cover certain unfunded liabilities, are based on unpublished data from the Office of Personnel Management (OPM) [13K]. These additional contributions are allocated equally to the four quarters of the fiscal year and then summed to calendar year estimates. Calendar year and quarterly not seasonally

adjusted estimates of employer and employee regular contributions to the foreign service fund and to the judicial survivors fund are from the *MTS* [77]. An additional contribution to the foreign service fund, from the *Budget Appendix* [4A-2], is similar to that described for the civil service fund and is treated in the same manner. Calendar year contributions for the Federal Reserve Board fund are available from the Board [2], and contributions for the TVA program are available from the agency [20]; quarterly not seasonally adjusted estimates for both are interpolations without an indicator. Calendar year and quarterly not seasonally adjusted estimates for all imputed retirement contributions are equivalent to the estimates of benefits for the various retirement programs as discussed in the derivation of expenditures (see page 45).

Seasonally adjusted estimates of the regular contributions are interpolations of the calendar year estimates using seasonally adjusted Federal civilian wages and salaries as the indicator. The not seasonally adjusted additional employer contributions are used as the seasonally adjusted estimates. Current monthly and quarterly estimates of the regular contributions are extrapolations using the wages and salaries series as the indicator; the additional employer contributions are judgmental extrapolations guided by budget projections.

The estimates of contributions to the civil service retirement fund include contributions for some employees of the District of Columbia. Contributions for these employees are from the *MTS* [77] and are divided equally as employer and employee contributions. A portion of the District of Columbia contribution is allocated to State and local general government and government enterprises in the same manner as for the State unemployment tax. Federal Government employer regular contributions are allocated to civilian general government and enterprises in the same manner as for the unemployment contribution. The additional Federal employer contribution is allocated to civilian general government and government enterprises on the basis of the unpublished data from OPM. The imputations, like the cash contributions to retirement funds, are a part of Federal employee compensation and are allocated to civilian general government and enterprises in the same manner described for unemployment contributions.

Military retirement.—Estimates of contributions for military retirement, including those for the Coast Guard, are imputations based on estimates of retirement benefits discussed in the derivation of expenditures (see page 45). All contributions are employer contributions by general government.

Railroad retirement

Railroad retirement contributions consist of employer and employee taxes paid on monthly maximum taxable earnings and a separate "supplemental" employer contribution based on hours worked. Railroad

retirement contributions include contributions for HI. The RRB calculates the required annual HI contribution and transfers it to the HI trust fund.

Calendar year estimates of the combined retirement and HI contributions are based on wages and salaries subject to railroad retirement and HI taxes from the RRB [91]. Taxable wages and salaries are multiplied by tax rates to derive employer and employee contributions for combined retirement and HI. The HI taxable wages are multiplied by the HI tax rate, and this estimate is subtracted from the combined estimates to obtain the annual estimates for retirement contributions. Calendar year estimates of the supplemental employer contribution are derived by dividing fiscal year estimates from the *Budget Appendix* [4A-2] by four and summing the appropriate quarterly estimates.

Monthly and quarterly not seasonally adjusted estimates are interpolations of the calendar year estimates using the MTS railroad retirement contributions data as the indicator. The quarterly not seasonally adjusted HI estimates are prepared by dividing the calendar year estimate by four; this series is subtracted from the not seasonally adjusted railroad retirement contributions and added to HI contributions.

Monthly and quarterly seasonally adjusted estimates are interpolations and, for the current estimates, extrapolations using seasonally adjusted NIPA railroad wages and salaries as the indicator. Changes in the tax rate or the maximum taxable earnings are estimated separately and added to the seasonally adjusted estimates.

Veterans life insurance

There are five veterans life insurance programs: National Service Life Insurance, United States Government Life Insurance, the service-disabled insurance fund, the veterans special life insurance fund, and the veterans reopened insurance fund. The programs are funded by premiums paid by veterans and by Federal Government payments.

The Veterans' Administration provides data for monthly insurance premiums paid by veterans for all programs [93], which are treated as personal contributions for social insurance. Quarterly not seasonally adjusted and calendar year NIPA estimates are the sum of the monthly estimates.

Government payments on behalf of servicemen are treated as employer contributions. Currently, these payments are small, but were large in the period just after World War II. Employer contributions are from the Veterans' Administration financial reports [93]. Quarterly not seasonally adjusted and calendar year NIPA estimates are the sum of the monthly data. All of these payments are employer contributions by general government. Monthly seasonally adjusted estimates are interpolations without indicator and, for the current estimates, judgmental extrapolations.

Workers' compensation

The Federal Government pays workers' compensation benefits to Federal employees injured on the job. All estimates of workers' compensation contributions are imputations based on estimates of benefits discussed in the derivation of expenditures (see page 45). The contributions are employer contributions and are allocated judgmentally to general government and enterprises; current allocations are extrapolations.

Military medical insurance

The Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) provides medical treatment for dependents of active duty military personnel and for military retirees and their dependents. Benefits paid are included in transfer payments to persons. Benefits for dependents of active duty military personnel are comparable to health benefits provided for civilian employees and their families, which are part of other labor income in the NIPA's and therefore part of Federal employee compensation. In order to make the measure of military compensation comparable to that of civilian compensation, a social insurance contribution is imputed for the portion of CHAMPUS providing benefits for dependents of active duty personnel. The estimates are imputations based on estimates of benefits discussed in the derivation of expenditures (see page 46). The contributions are employer contributions by general government.

Derivation of Expenditures

The NIPA categories of Federal expenditures, as indicated earlier, are derived from budget data supplemented by other information from Federal agencies. These data are adjusted for coverage and for netting and grossing differences, as shown in table II-2, to put them on a basis consistent with NIPA concepts. The sources and methods used to derive NIPA expenditures yield the required timing basis; the timing difference shown in table II-2 is calculated as the difference between budget outlays and NIPA expenditures. Table II-5 shows the sources of estimates for Federal Government expenditures. In general, the level of detail shown is that at which the estimates are prepared; where footnoted, the level of detail has been aggregated to an "other" or "all other" category because the methodology is the same for the detailed estimates.

Purchases of goods and services

Federal Government purchases of goods and services are estimated for two major categories: National defense, and nondefense. The national defense category consists of the purchases of goods and services for the activities covered by the national defense function in the budget—military activities of the Depart-

Table II-5.—Federal Government Expenditures: Sources of Estimates

Line	Category	Calendar year 1982 (Billions of dollars)	Procedure used to prepare seasonally adjusted estimates	First July revision: Quarterly and calendar year estimates ¹	Current quarterly and, when applicable, monthly estimates
1	Expenditures	781.2			
2	Purchases of goods and services.	272.7			
3	National defense	193.8	See table II-7 for sources of estimates.	See table II-7 for sources of estimates.	See table II-7 for sources of estimates.
4	Nondefense	78.9			
5	Commodity Credit Corporation inventory change.	9.2			
6	Acquisitions	15.2			
7	Barley .....	.2	Additive X-11	<p>For each commodity, the following sources are used:</p> <p>ASCS for information about quantities and transaction prices for CCC activities NASS for nondairy market price information AMS for dairy market price information</p>	
8	Butter .....	.6	Additive X-11		
9	Cheese .....	.9	Additive X-11		
10	Corn	4.2	Additive X-11		
11	Upland cotton	1.9	Additive X-11		
12	Grain sorghum .....	.6	Additive X-11		
13	Dried milk .....	.8	Additive X-11		
14	Rough rice .....	.6	Additive X-11		
15	Soybeans	2.2	Additive X-11		
16	Wheat	2.1	NSA = SA		
17	All other crops .....	.8	Additive X-11		
18	Accounting adjustment .....	.3	Additive X-11		
19	Less: Dispositions	6.0			
20	Barley .....	.1	NSA = SA		
21	Butter .....	.5	NSA = SA		
22	Cheese .....	.5	Additive X-11		
23	Corn	1.1	Additive X-11		
24	Upland cotton .....	.9	Additive X-11		
25	Grain sorghum .....	.1	NSA = SA		
26	Dried milk .....	.4	Additive X-11		
27	Rough rice .....	.2	Additive X-11		
28	Soybeans	1.1	Additive X-11		
29	Wheat .....	.5	Additive X-11		
30	All other crops .....	.6	Additive X-11		
31	Accounting adjustment	0	NSA = SA		
32	National Aeronautics and Space Administration.	5.8	Multiplicative X-11	MTS outlays and fiscal year analysis relationships.	MTS outlays and fiscal year analysis relationships.
33	Imputed financial services .....	.4	Interpolated using flow of funds holdings as indicator.	FDIC and Federal Reserve Board data on bank income and on deposits.	Extrapolated judgmentally.
34	Other ²	63.5	Multiplicative X-11 except for compensation.	MTS outlays and fiscal year analysis relationships except for compensation.	MTS outlays and fiscal year analysis relationships except for compensation.
35	Transfer payments	324.1			
36	To persons	316.3			
37	Benefits from social insurance funds.	273.6			
38	Old-age, survivors, and disability insurance.	153.7	Multiplicative X-11	SSA monthly payments	Extrapolated judgmentally; SSA monthly payments, when available.
39	Hospital and supplementary medical insurance.	50.8	Interpolated without indicator and extrapolated judgmentally.	MTS outlays and fiscal year analysis relationships.	Extrapolated judgmentally, guided by budget projection.
40	Unemployment insurance ...	25.2			
41	State	23.4	Multiplicative X-11 for regular and reimbursable benefits; NSA = SA for extended benefits.	UIS annual benefits, prorated using gross UIS monthly regular and extended benefits.	Extrapolated judgmentally, guided by cash withdrawals and unemployment rates.
42	Railroad employees .....	.4	Multiplicative X-11	MTS outlays	Extrapolated judgmentally; MTS outlays when available.
43	Federal employees .....	.3	Multiplicative X-11	UIS benefits	Extrapolated judgmentally.
44	Special unemployment benefits.	1.1	NSA = SA	UIS	No benefits are currently paid.
45	Federal employee retirement.	35.2			
46	Civilian	19.9	Multiplicative X-11 for civil service retirement and NSA = SA for all other.	MTS outlays for civil service and foreign service retirement; agency or budget data for all other.	Extrapolated judgmentally; civil service and foreign service from MTS when available.

Table II-5.—Federal Government Expenditures: Sources of Estimates—Continued

Line	Category	Calendar year 1982 (Billions of dollars)	Procedure used to prepare seasonally adjusted estimates	First July revision: Quarterly and calendar year estimates ¹	Current quarterly and, when applicable, monthly estimates
47	Military	15.4	Multiplicative X-11	MTS outlays	Extrapolated judgmentally; MTS outlays when available.
48	Railroad retirement	5.8	NSA = SA	MTS outlays	Extrapolated judgmentally; MTS outlays when available.
49	Veterans life insurance	1.4	Multiplicative X-11 in most years; NSA = SA in others.	VA reports	Extrapolated judgmentally; VA payments data when available.
50	Workers' compensation .....	.9	Interpolated without indicator and extrapolated judgmentally.	ESA reports	Extrapolated judgmentally, guided by budget projection.
51	Military medical insurance ³ .	.5	NSA = SA	DOD reports	Extrapolated judgmentally, guided by budget projection.
52	Veterans benefits	14.9	Multiplicative X-11	MTS outlays and VA reports	Extrapolated judgmentally, guided by budget projection; MTS outlays when available.
53	Pension and disability	13.3			
54	Readjustment	1.6	Interpolated using judgmental indicator and extrapolated judgmentally.	MTS outlays and VA reports	Extrapolated judgmentally, guided by budget projection.
55	Food stamp benefits	9.9	Multiplicative X-11	FNS reports	Extrapolated judgmentally, guided by budget projections; FNS benefits data when available.
56	Black lung benefits	1.7	NSA = SA	SSA and ESA reports	SSA and ESA benefits.
57	Supplemental security income.	6.9	NSA = SA	SSA reports	Extrapolated judgmentally; SSA benefits data when available.
58	Earned income credit	1.2	Calendar year divided by 12	MTS outlays	Extrapolated judgmentally, guided by budget projection.
59	Other	8.2	NSA = SA	MTS outlays and fiscal year analysis relationships.	Extrapolated judgmentally, guided by budget projection.
60	Aid to students ⁴	4.5			
61	Payments to nonprofit institutions.	2.6	Interpolated without indicator and extrapolated judgmentally.	MTS outlays and fiscal year analysis relationships.	Extrapolated judgmentally, guided by budget projection.
62	Military medical insurance ³ .	.6	NSA = SA	DOD reports	Extrapolated judgmentally, guided by budget projection.
63	All other ⁵ .....	.4	NSA = SA for most programs; Alaskan native claims interpolated without indicator.	MTS outlays and fiscal year analysis relationships.	Extrapolated judgmentally, guided by budget projection.
64	To foreigners	7.8	NSA = SA for most programs; calendar year divided by 4 for contributions to international organizations.	BPA data	BPA projection; BPA data when available.
65	Grants-in-aid to State and local governments.	83.9			
66	Highways	7.7	Multiplicative X-11	MTS outlays and fiscal year analysis relationships.	MTS outlays and fiscal year analysis relationships.
67	Medicaid	17.9	NSA = SA	MTS outlays and fiscal year analysis relationships.	MTS outlays and fiscal year analysis relationships.
68	Public assistance	2.6	NSA = SA	MTS outlays and fiscal year analysis relationships.	MTS outlays and fiscal year analysis relationships.
69	Education	7.7	Multiplicative X-11	MTS outlays and fiscal year analysis relationships.	MTS outlays and fiscal year analysis relationships.
70	Urban renewal .....	.1	Multiplicative X-11	MTS outlays and fiscal year analysis relationships.	MTS outlays and fiscal year analysis relationships.
71	Revenue sharing	4.6	NSA = SA	MTS outlays and fiscal year analysis relationships.	MTS outlays and fiscal year analysis relationships.
72	Public service jobs .....	.1	NSA = SA	MTS outlays and fiscal year analysis relationships.	MTS outlays and fiscal year analysis relationships.
73	Community development	4.0	Multiplicative X-11	MTS outlays and fiscal year analysis relationships.	MTS outlays and fiscal year analysis relationships.
74	Urban mass transit	2.6	Multiplicative X-11	MTS outlays and fiscal year analysis relationships.	MTS outlays and fiscal year analysis relationships.
75	Water and sewage treatment	3.4	Multiplicative X-11	MTS outlays and fiscal year analysis relationships.	MTS outlays and fiscal year analysis relationships.

Table II-5.—Federal Government Expenditures: Sources of Estimates—Continued

Line	Category	Calendar year 1982 (Billions of dollars)	Procedure used to prepare seasonally adjusted estimates	First July revision: Quarterly and calendar year estimates ¹	Current quarterly and, when applicable, monthly estimates
76	Food and nutrition.....	4.3	Multiplicative X-11	MTS outlays and fiscal year analysis relationships.	MTS outlays and fiscal year analysis relationships.
77	Health care.....	2.9	Multiplicative X-11	MTS outlays and fiscal year analysis relationships.	MTS outlays and fiscal year analysis relationships.
78	Other ⁶	18.0	Multiplicative X-11 and interpolated without indicator.	MTS outlays and fiscal year analysis relationships; a few are fiscal year outlays divided by 4.	MTS outlays and fiscal year analysis relationships; a few are fiscal year outlays divided by 4.
79	Net interest paid	84.6			
80	Interest paid	101.1			
81	To persons and business.....	82.9	Multiplicative X-11	Fiscal year estimates interpolated using MTS interest.	Fiscal year estimates extrapolated using MTS interest.
82	To foreigners	18.3	NSA = SA.....	BPA data.....	BPA projection; BPA data when available.
83	Less: Interest received by government.	16.6			
84	From persons and business...	13.0			
85	Monetary	12.5	NSA = SA.....	Fiscal year estimate interpolated without indicator.	Extrapolated judgmentally, guided by budget projection.
86	Imputed financial services ..	.4	Interpolated using flow of funds holdings as indicator.	FDIC and Federal Reserve Board data on bank income and on deposits.	Extrapolated judgmentally.
87	From foreigners	3.6	Multiplicative X-11, NSA = SA, and interpolated without indicator.	BPA data.....	BPA projection; BPA data when available.
88	Subsidies less current surplus of government enterprises..	16.0			
89	Subsidies.....	15.0			
90	Agricultural.....	2.7	NSA = SA.....	ASCS payments data for CCC; MTS outlays and fiscal year relationships for others.	ASCS payments data for CCC; extrapolated judgmentally for all others.
91	Housing	9.8			
92	HUD, "Section 8" program ..	4.1	Interpolated without indicator and extrapolated judgmentally.	MTS outlays and fiscal year analysis relationships.	Extrapolated judgmentally, guided by budget projection.
93	HUD, other low-rent public housing.	3.0	Interpolated without indicator and extrapolated judgmentally.	MTS outlays and fiscal year analysis relationships.	Extrapolated judgmentally, guided by budget projection.
94	HUD, rent suppl., homeownership, and rental housing assistance.	1.2	Interpolated without indicator and extrapolated judgmentally.	MTS outlays and fiscal year analysis relationships.	Extrapolated judgmentally, guided by budget projection.
95	HUD, other housing programs.	.1	Interpolated without indicator and extrapolated judgmentally.	MTS outlays and fiscal year analysis relationships.	Extrapolated judgmentally, guided by budget projection.
96	Farmers Home Admin., interest supplement programs.	1.5	Interpolated without indicator and extrapolated judgmentally.	Budget data, interpolated without indicator.	Extrapolated judgmentally, guided by budget projection.
97	Farmers Home Admin., other rural housing programs.	0	Interpolated without indicator and extrapolated judgmentally.	MTS outlays and fiscal year analysis relationships.	Extrapolated judgmentally, guided by budget projection.
98	Maritime.....	.5			
99	Maritime construction.....	.2	Multiplicative X-11	MTS outlays and fiscal year analysis relationships.	No subsidies are currently paid.
100	Maritime operating .....	.3	NSA = SA.....	MTS outlays and fiscal year analysis relationships.	Extrapolated judgmentally; MTS outlays when available.
101	Railroad .....	.8			
102	Amtrak.....	.7	Interpolated without indicator and extrapolated judgmentally.	MTS outlays and fiscal year analysis relationships.	Extrapolated judgmentally, guided by budget projection.
103	Other.....	.1	NSA = SA.....	MTS outlays and fiscal year analysis relationships.	No subsidies are currently paid.
104	Air carriers .....	.1	NSA = SA.....	Budget data, interpolated without indicator.	Extrapolated judgmentally, guided by budget projection.
105	Other ⁷	1.1	Interpolated without indicator and extrapolated judgmentally.	MTS outlays and fiscal year analysis relationships.	Extrapolated judgmentally, guided by budget projection.

Table II-5.—Federal Government Expenditures: Sources of Estimates—Continued

Line	Category	Calendar year 1982 (Billions of dollars)	Procedure used to prepare seasonally adjusted estimates	First July revision: Quarterly and calendar year estimates ¹	Current quarterly and, when applicable, monthly estimates
106	Less: Current surplus of government enterprises.	-.9			
107	Postal Service	-.6	Interpolated without indicator and extrapolated judgmentally.	Postal Service reports	Extrapolated judgmentally, guided by budget projection.
108	Commodity Credit Corporation.	-3.5			
109	Regular	-2.1	Interpolated without indicator and extrapolated judgmentally.	ASCS	Extrapolated judgmentally, guided by budget projection.
110	Valuation adjustment	-1.4			
111	Acquisitions	-.9			
112	Barley	0	Additive X-11	<p>For each commodity, the following sources are used:</p> <p>ASCS for information about quantities and transaction prices for CCC activities NASS for nondairy market price information AMS for dairy market price information</p>	
113	Butter	0	NSA = SA		
114	Cheese	-.1	Additive X-11		
115	Corn	-.7	Additive X-11		
116	Upland cotton .....	.1	Additive X-11		
117	Grain sorghum	-.1	NSA = SA		
118	Dried milk	0	NSA = SA		
119	Rough rice	0	Additive X-11		
120	Soybeans .....	.2	Additive X-11		
121	Wheat	-.3	Additive X-11		
122	All other crops	0	NSA = SA		
123	Less: Dispositions .....	.4			
124	Barley	0	NSA = SA		
125	Butter	0	NSA = SA		
126	Cheese	0	Additive X-11		
127	Corn	0	Additive X-11		
128	Upland cotton .....	.1	Additive X-11		
129	Grain sorghum	0	NSA = SA		
130	Dried milk	0	NSA = SA		
131	Rough rice	0	Additive X-11		
132	Soybeans .....	.2	Additive X-11		
133	Wheat .....	.1	NSA = SA		
134	All other crops	0	NSA = SA		
135	Other	3.1	Interpolated without indicator and extrapolated judgmentally.		Extrapolated judgmentally, guided by budget projection.
136	Federal Housing Administration.	.5		Federal Housing Administration reports, interpolated without indicator.	
137	Tennessee Valley Authority.	1.2		Tennessee Valley Authority reports, interpolated without indicator.	
138	All other ^a	1.4		Budget data, interpolated without indicator.	
139	Less: Wage accruals less disbursements.	0	NSA = SA	Postal Service data	Postal Service data.
140	Surplus or deficit (-), national income and product accounts.	-145.9			
141	Social insurance funds	-30.8			
142	Other	-115.0			

1. Except as noted, the estimates for later revisions have the same sources.

2. The sources for compensation of employees are described in table II-7.

3. Benefits to dependents of active duty personnel are treated as social insurance benefits; those to retired military personnel and their dependents are included in other transfer payments.

4. Includes higher education student assistance (Pell grants) and interest payments on guaranteed student loans.

5. Includes payments to native Americans, payments to former employees of railroads combined to form Conrail, special benefits for workers rendered unemployed by the expansion of Redwood National Park, trade adjustment assistance, stipends to Job Corps trainees, and benefits for disabled longshoremen and harbor workers.

6. Includes grants for training and employment services, State administration of unemployment insurance, low income home energy assistance, Head Start and services for the aging, research and development funded by the Department of Energy, refugee assistance, assistance rendered by States to the SSA in determining eligibility for disability benefits, and payments to States under the Mineral Leasing Act.

7. Includes mass transit, surface mining, and disaster subsidies.

8. Includes Federal Deposit Insurance Corporation, Federal Savings and Loan Insurance Corporation, National Credit Union Administration Share Insurance Fund, Bonneville Power Administration, Southeastern Power Administration, Southwestern Power Administration, and Pension Benefit Guaranty Corporation.

AMS
ASCS

BPA
CCC
DOD
ERS
ESA
FDIC
FNS
HUD
MTS
NASS
NSA
SA
SSA
UIS
VA
X-11

Agricultural Marketing Service, U.S. Department of Agriculture.
Agricultural Stabilization and Conservation Service, U.S. Department of Agriculture.
Balance of Payments Accounts.
Commodity Credit Corporation.
U.S. Department of Defense.
Economic Research Service, U.S. Department of Agriculture.
Employment Security Administration, U.S. Department of Labor.
Federal Deposit Insurance Corporation.
Food and Nutrition Service, U.S. Department of Agriculture.
U.S. Department of Housing and Urban Development.
Monthly Treasury Statement.
National Agricultural Statistics Service, U.S. Department of Agriculture.
Not seasonally adjusted.
Seasonally adjusted.
Social Security Administration.
Unemployment Insurance Service, U.S. Department of Labor.
Veterans' Administration.
Census Bureau seasonal adjustment procedure.

Table II-6.—Relation of National Defense Purchases in the National Income and Product Accounts to National Defense Outlays in the Budget, Calendar Year 1982

(Billions of dollars)	
National defense outlays in the unified budget.....	193.6
Department of Defense, military.....	188.7
Atomic energy defense activities.....	4.5
Defense-related activities ¹.....	.4
Plus: Military assistance purchases.....	.5
Less: Grants-in-aid to State and local governments.....	1.1
Timing difference.....	-.3
Other adjustments.....	-.5
Equals: National defense purchases, NIPA's.....	193.8

1. Consists of the emergency management planning and assistance function of the Federal Emergency Management Agency, property resources activities of the General Services Administration, the Selective Service System, the Intelligence Community Staff, and a payment to the retirement fund of the Central Intelligence Agency.

ment of Defense, defense-related atomic energy activities of the Department of Energy, and defense-related activities of other agencies—plus those for military assistance. The nondefense category consists of the purchases of goods and services for all the remaining activities of the Federal Government. Purchases for each category are also estimated by type of purchase: Durable goods, nondurable goods, compensation of employees, services other than compensation, and structures.

National defense purchases

Total national defense purchases, as indicated earlier, are derived from budget outlays as part of the fiscal year analysis. Outlays are adjusted for timing, coverage, and other differences, as shown in table II-6, to put them on a basis consistent with NIPA purchases.

Within the budget-based control total, estimates of national defense purchases by type, except compensation of employees, are prepared using one of three methods and summed to the detail shown in the first column of table II-7 and published in NIPA table 3.9. (Appendix II-A provides definitions of the components at this level of detail.)³ When data are available, the estimates are prepared as the product of a delivered quantity and a price paid. This method, referred to in table II-7 as the “directly priced” method, is preferred because it allows the development of corresponding constant-dollar estimates by using the delivered quantity—the same as used with current-dollar estimates—with the base-year price. The method is described for aircraft, the first component listed. Data to implement the method for a variety of goods and for some services are available from the Department of Defense (DOD). Two sources of price and quantity data are widely used:

- **Contract Control Documentation Reports (CCDR's):** Data on prices paid by DOD for compo-

nents of major weapons systems are available in contract control documentation reports [7]. For example, “Contract Cost Data Reports” (CCDR, DD Form 1921-1) [7A] provides current prices for items listed in a contract. These reports are prepared monthly and are usually available by the final quarterly estimate.

- **Production Control Reports (PCR's):** Data on the quantities of major components accepted by DOD are available for weapons systems in a number of production control reports [18]. For example, the “Monthly Aircraft Acceptance Report” [18G] provides quantity data for aircraft accepted by the Navy. The reports are prepared monthly and are generally available by the final quarterly estimate.

When data on prices and quantities are not available, current-dollar estimates of purchases of most components are derived from DOD financial reports (see below), using what is referred to in table II-7 as the “ratio” method, and from budget outlays [77, 9K], using what is referred to as the “directly estimated” method. The ratio method is described for aircraft, and the directly estimated method is described for ships. Two sets of the DOD reports are widely used in implementing these methods:

- **Contract Awards (CA):** Data on contract awards by four-digit Federal Supply Class are available in several reports [6]. For example, *Department of Defense Prime Contract Awards* [6A] contains data on type-of-service purchases for some service subcategories, such as education services, within the personnel support category. It is published on a fiscal year basis and is generally available by the first July revision following the end of the fiscal year.
- **Financial Reports (FR's):** Detailed data on disbursements (and in some cases, obligations) are available as part of the DOD financial reports series [9]. The disbursements data are reported monthly by each department of DOD in (DD COMP (M) 1002)—for example, by the Air Force in “Appropriation Status by Fiscal Year Program and Subaccounts” [9A]—and are generally available by the final quarterly estimate.

Most estimates of purchases by type are developed quarterly; quarterly not seasonally adjusted data are summed to obtain calendar year estimates. For a few types of purchases, estimates are developed for fiscal years and the quarters are interpolated without an indicator. The second column of table II-7 indicates which of the three general methods is used. The third column shows the 1982 value at a summary level of detail for the methods of estimation; the estimates are prepared at a much greater level of detail. The fourth column shows the procedure used to prepare the seasonally adjusted estimates. The fifth column describes

3. Prior to 1972, a breakdown of national defense purchases by type was not available. Many of the source data for the breakdown were identified in a major project undertaken with DOD [44].

the source data with which these methods are implemented for the first July revision, and the last three columns describe the source data for current quarterly estimates at the three stages of the estimating cycle.

Aircraft.—Most purchases of aircraft are directly priced; the others are derived using the ratio method. The difference between the estimate of purchases derived using the two methods and budget outlays for aircraft is the timing adjustment.

Directly priced purchases.—An aircraft system, such as the F-15, is usually purchased by DOD as components. The components—such as engines, airframe, guns, and various electronic subsystems—are supplied as government-furnished equipment to the airframe contractor who performs the final integration and assembly. Component estimates are obtained using the quantity delivered to DOD in a quarter as the quantity and the price paid by DOD as the price. The estimates for each component, including integration and assembly, are summed. For most components of major weapons systems, data on quantities delivered to DOD are available in PCR's [18A, B, C, F, G], and data on prices paid by DOD are available in CCDR's [7]. Quarterly not seasonally adjusted data are used as the seasonally adjusted estimates. Quarterly estimates are summed to calendar year estimates.

For the advance quarterly estimate, quantities delivered and prices paid are based largely on scheduled deliveries and prices from unpublished data underlying the budget [4B-2, -5, -15]. Data from PCR's and CCDR's are incorporated in the estimates as they become available. If PCR's or CCDR's are not available for a given estimate, the appropriate office in DOD is contacted to determine if there are any known changes from the scheduled deliveries or prices.

Ratio purchases.—Delivery schedules or prices are not available for some aircraft components, parts, equipment, and associated items. Estimates of current-dollar purchases for these items are derived indirectly. An indirect pricing factor (IPF)—the ratio of funds that are not directly priced to total funds available to be spent for a major group—is derived from FR's [9A, F, L, Q] for major groups of aircraft systems, such as for Air Force combat aircraft. The IPF is applied to quarterly disbursements from FR's [9A, B, F, G, Q, T] to derive purchases. Quarterly not seasonally adjusted data are used as the seasonally adjusted estimates. Quarterly estimates are summed to calendar year estimates.

For the advance quarterly estimate, the IPF is judgmental and is applied to a quarterly estimate based on 2 months of outlays from the MTS [77]; for the final estimate, the IPF is applied to quarterly disbursements from FR's. More refined estimates of

the IPF are made as data on the directly priced purchases and total obligated funds become established.

Missiles.—Purchases of missiles are derived using the directly priced method, with quantity data from PCR's [18A, B, C, D] and price data from CCDR's [7], and the ratio method, with disbursements from FR's [9A, B, F, G, Q, T]. The sum of purchases derived using the two methods is the estimate of missiles purchases for the quarter. Quarterly not seasonally adjusted data are used as the seasonally adjusted estimates. Quarterly estimates are summed to calendar year estimates. The difference between the estimate of purchases and total outlays for missiles in the quarter is the timing adjustment.

The current quarterly estimates of missiles are prepared in the same manner as aircraft, using—for the advance estimate—scheduled deliveries and prices from unpublished data underlying the budget [4B-3, -6, -12, -13].

Ships.—Purchases of ships are derived using the directly priced method, with quantity data from PCR's [18E] and price data from CCDR's [7]; the ratio method, with disbursements from FR's [9Q, T]; and a directly estimated method for private shipyards. (The directly estimated method is described in the next paragraph.) The quarterly estimates of directly priced purchases and of ratio purchases are seasonally adjusted using the Census X-11 procedure. Quarterly estimates are summed to calendar year estimates. The sum of purchases derived using the directly estimated purchases from private shipyards and the directly priced and ratio methods is the estimate of ship purchases for the quarter. The difference between this sum and total outlays for ship construction and conversion in the quarter is the timing adjustment.

The current quarterly estimates of ships other than those that are directly estimated are prepared in the same manner as aircraft, using—for the advance estimate—scheduled deliveries and prices from unpublished data underlying the budget [4B-16].

The source data include ships that are sold to foreign countries under the foreign military sales program. When the ship is exported, the value is subtracted—based on balance of payments accounts data [46]—to derive net purchases and to offset the inclusion of the ship in exports so that GNP is not affected. (The ship is included in defense purchases and in GNP as it is constructed.)

Directly estimated purchases.—Navy ship construction and conversion performed in private shipyards is included in the NIPA purchases on a workput-in-place basis rather than a delivery basis. This work consists of construction of the hull and superstructure and the assembly and integration of components and subsystems provided to the shipyard as government-furnished equipment. Disbursements by the Navy correspond closely to work done (that is, purchases) in a given quarter. Quarterly data on

Table II-7.—National Defense Purchases: Sources of Estimates

Category	Method	Calendar year 1982 (Billions of dollars)	Procedure used to prepare seasonally adjusted estimates	July revision ¹	Current quarterly estimates		
					Advance	Preliminary	Final
National defense.	Sum of detail.....	193.8					
Durable goods.....	Sum of detail.....	49.2					
Aircraft.....	Directly priced:	7.4	NSA=SA.....	PCR's.....	Budget or, when available, PCR's.	More PCR's.....	Many PCR's.
	Quantities			CCDR's.....	Budget or, when available, CCDR's.	More CCDR's.....	Many CCDR's.
	Prices			FR quarterly disbursements.	Extrapolated using MTS outlays as indicator.	Extrapolated using MTS outlays as indicator.	FR quarterly disbursements.
Missiles	Ratio	9.4	NSA=SA.....	FR quarterly disbursements.	Extrapolated using MTS outlays as indicator.	Extrapolated using MTS outlays as indicator.	FR quarterly disbursements.
	Directly priced:	2.0	NSA=SA.....	PCR's.....	Budget or, when available, PCR's.	More PCR's.....	Many PCR's.
	Quantities			CCDR's.....	Budget or, when available, CCDR's.	More CCDR's.....	Many CCDR's.
Ships	Prices			FR quarterly disbursements.	Extrapolated using MTS outlays as indicator.	Extrapolated using MTS outlays as indicator.	FR quarterly disbursements.
	Ratio	3.7	NSA=SA.....	FR quarterly disbursements.	Extrapolated using MTS outlays as indicator.	Extrapolated using MTS outlays as indicator.	FR quarterly disbursements.
	Directly priced:	.2	Multiplicative X-11.	PCR's.....	Budget or, when available, PCR's.	More PCR's.....	Many PCR's.
Vehicles.....	Quantities			CCDR's.....	Budget or, when available, CCDR's.	More CCDR's.....	Many CCDR's.
	Prices			FR quarterly disbursements.	Extrapolated using MTS outlays as indicator.	Extrapolated using MTS outlays as indicator.	FR quarterly disbursements.
	Ratio	2.8	Multiplicative X-11.	FR quarterly disbursements.	Extrapolated using MTS outlays as indicator.	Extrapolated using MTS outlays as indicator.	FR quarterly disbursements.
Electronic equipment.	Directly estimated.	3.0	NSA=SA.....	FR quarterly disbursements, BPA data.	Extrapolated using MTS outlays as indicator, BPA data.	Extrapolated using MTS outlays as indicator, BPA data.	FR quarterly disbursements, BPA data.
	Directly priced:	1.6	NSA=SA.....	PCR's.....	Budget data or, when available, PCR's.	More PCR's.....	Many PCR's.
	Quantities			CCDR's.....	Budget data or, when available, CCDR's.	More CCDR's.....	Many CCDR's.
Other equipment	Prices			FR quarterly disbursements.	Extrapolated using MTS outlays as indicator.	Extrapolated using MTS outlays as indicator.	FR quarterly disbursements.
	Ratio	1.3	NSA=SA.....	FR quarterly disbursements.	Extrapolated using MTS outlays as indicator.	Extrapolated using MTS outlays as indicator.	FR quarterly disbursements.
	Directly estimated.	3.1	NSA=SA.....	FR quarterly disbursements.	Extrapolated using MTS outlays as indicator.	Extrapolated using MTS outlays as indicator.	FR quarterly disbursements.
Other durable goods.	Directly estimated.	5.8	NSA=SA.....	FR quarterly disbursements.	Extrapolated using MTS outlays as indicator.	Extrapolated using MTS outlays as indicator.	FR quarterly disbursements.
	Directly priced:	8.9	NSA=SA.....	FR quarterly disbursements, CA, and BPA data.	Extrapolated judgmentally.	Extrapolated judgmentally.	FR quarterly disbursements, extrapolated judgmentally, and, when available, BPA data.
	Quantities						

See footnotes at end of table.

Table II-7.—National Defense Purchases: Sources of Estimates—Continued

Category	Method	Calendar year 1982 (Billions of dollars)	Procedure used to prepare seasonally adjusted estimates	July revision ¹	Current quarterly estimates		
					Advance	Preliminary	Final
Nondurable goods	Sum of detail.....	13.6					
Petroleum products.	Directly priced....	8.1	NSA=SA.....	PPR's.....	Extrapolated judgmentally or, when available, PPR's.	PPR's	PPR's.
	Directly estimated.	1.1	NSA=SA.....	FR quarterly disbursements.	Extrapolated judgmentally.	Extrapolated judgmentally.	FR quarterly disbursements.
Ammunition	Directly priced: Quantities .....	.3	NSA=SA.....	Budget data	Budget data or, when available, PCR's.	Budget data.....	Budget data.
	Prices			CCDR's.....	Budget data or, when available, CCDR's.	More CCDR's	Many CCDR's.
	Directly estimated.	2.0	NSA=SA.....	FR quarterly disbursements.	Extrapolated using MTS outlays as indicator.	Extrapolated using MTS outlays as indicator.	FR quarterly disbursements.
Other nondurable goods.	Directly estimated.	2.1	Multiplicative X-11.	FR quarterly disbursements, CA, and BPA data.	Extrapolated judgmentally.	Extrapolated judgmentally.	FR quarterly disbursements, extrapolated judgmentally, and, when available, BPA data.
Services	Sum of detail.....	127.1					
Military compensation.	Sum of detail.....	56.6					
Wages and salaries.		39.1	Interpolated and extrapolated using employment as indicator.	Budget wages and salaries.	Extrapolated using employment as indicator and judgment.	Extrapolated using employment as indicator and judgment.	Extrapolated using employment as indicator and judgment.
Supplements: Employer contributions for social insurance.		17.5	See table II-4 for sources of estimates.	See table II-4 for sources of estimates.	See table II-4 for sources of estimates.	See table II-4 for sources of estimates..	See table II-4 for sources of estimates.
Civilian compensation.	Sum of detail.....	27.4					
Wages and salaries.		22.7	Interpolated without indicator and extrapolated judgmentally.	OPM wages and salaries.	Extrapolated judgmentally.	Extrapolated judgmentally.	Extrapolated judgmentally.
Supplements: Employer contributions for social insurance.		3.5	See table II-4 for sources of estimates.	See table II-4 for sources of estimates.	See table II-4 for sources of estimates.	See table II-4 for sources of estimates.	See table II-4 for sources of estimates.
Other labor income.		1.1	Interpolated without indicator and extrapolated judgmentally.	OPM employee benefits.	Interpolated without indicator and extrapolated judgmentally.	Interpolated without indicator and extrapolated judgmentally.	Interpolated without indicator and extrapolated judgmentally.

See footnotes at end of table.

Table II-7.—National Defense Purchases: Sources of Estimates—Continued

Category	Method	Calendar year 1982 (Billions of dollars)	Procedure used to prepare seasonally adjusted estimates	July revision ¹	Current quarterly estimates		
					Advance	Preliminary	Final
Services—Continued							
Other services.....	Sum of detail.....	43.2					
Contractual research and development.	Directly estimated.	16.3	Multiplicative X-11.	MTS outlays adjusted by NSF data.	Extrapolated using MTS outlays as indicator.	MTS outlays adjusted by NSF data.	MTS outlays adjusted by NSF data.
Installation support.	Directly estimated.	12.0	Multiplicative X-11 and interpolated without indicator and extrapolated judgmentally.	FR quarterly disbursements and CA.	Extrapolated judgmentally.	Extrapolated judgmentally.	Extrapolated judgmentally and FR quarterly disbursements.
Weapons support.	Directly estimated.	5.5	Multiplicative X-11 and interpolated without indicator and extrapolated judgmentally.	FR quarterly disbursements and CA.	Extrapolated judgmentally.	Extrapolated judgmentally.	Extrapolated judgmentally and FR quarterly disbursements.
Personnel support.	Directly estimated.	3.6	Multiplicative X-11 and interpolated without indicator and extrapolated judgmentally.	CA and BPA data.	Extrapolated judgmentally.	Extrapolated judgmentally.	Extrapolated judgmentally and, when available, BPA data.
Transportation of materiel.	Directly estimated.	3.2	Multiplicative X-11.	FR quarterly obligations and various DOD reports as available.	Extrapolated judgmentally.	Extrapolated judgmentally or, when available, FR quarterly obligations.	FR quarterly obligations and various DOD reports as available.
Travel of persons.	Directly estimated.	2.6	NSA=SA.....	FR quarterly obligations and various DOD reports as available.	Extrapolated judgmentally.	Extrapolated judgmentally or, when available, FR quarterly obligations.	FR quarterly obligations and various DOD reports as available.
Other.....	Directly estimated.	(*)	NSA=SA.....	MTS outlays and BPA data.	Extrapolated using MTS outlays as indicator.	MTS outlays and extrapolated judgmentally.	MTS outlays and extrapolated judgmentally or, when available, BPA data.
Structures.....	Sum of detail.....	3.9					
Military facilities.....	Directly priced...	.7	NSA=SA.....	CPR's.....	Extrapolated judgmentally or, when available, CPR's.	More CPR's.....	Many CPR's.
	Directly estimated.	1.6	NSA=SA.....	FR quarterly disbursements.	Extrapolated using MTS outlays as indicator.	Extrapolated using MTS outlays as indicator.	FR quarterly disbursements.
Other structures	Directly estimated.	1.6	Multiplicative X-11.	FR quarterly disbursements and CCR.	Extrapolated using MTS outlays as indicator and CCR.	Extrapolated using MTS outlays as indicator and CCR.	FR quarterly disbursements and CCR.

* Less than \$0.05 billion.

1. The estimates for later revisions have the same sources.

BPA Balance of Payments Accounts.
CA Contract awards.
CCDR Contract control documentation report.
CCR Current Construction Reports.

CPR Construction project report.
FR Financial reports.
MTS Monthly Treasury Statement.
NSA Not seasonally adjusted.
NSF National Science Foundation.

OPM Office of Personnel Management.
PCR Production control report.
PPR Petroleum products report.
SA Seasonally adjusted.
X-11 Census Bureau seasonal adjustment procedure.

disbursements are available in FR's [9Q, T]. Quarterly not seasonally adjusted data are used as the seasonally adjusted estimates. Quarterly estimates are summed to calendar year estimates.

The advance quarterly estimate is an extrapolation using 2 months of *MTS* outlays as the indicator. FR disbursements data are used as they become available, generally by the final estimate.

Vehicles.—Purchases of vehicles are derived using the directly priced method, with quantity data from PCR's [18C] and price data from CCDR's [7], and the ratio method, with disbursements from FR's [9A, B, F, G, Q, T]. The sum of purchases derived using the two pricing methods is the estimate of vehicles purchases for the quarter. Quarterly not seasonally adjusted data are used as the seasonally adjusted estimates. Quarterly estimates are summed to calendar year estimates. The difference between the estimate of purchases and total outlays for vehicles in the quarter is the timing adjustment.

The current quarterly estimates of vehicles are prepared in the same manner as aircraft, using—for the advance estimate—scheduled deliveries and prices from unpublished data underlying the budget [4B-4, -7, -8, -9, -10, -11].

Electronic equipment.—Purchases of electronic equipment, such as radio sets and radar systems that are not initially installed as components of a weapons system, are directly estimated. Quarterly data on disbursements are available in FR's [9A, B, F, G, L, O, Q, T]. Quarterly not seasonally adjusted data are used as the seasonally adjusted estimates. Quarterly estimates are summed to calendar year estimates.

The advance quarterly estimate is an extrapolation using 2 months of *MTS* outlays as the indicator. FR disbursements data are used as they become available, generally by the final estimate.

Other equipment.—Purchases of other equipment, such as portable pontoon bridges and other military-specific items that are not initially installed as components of a weapons system, are directly estimated. Quarterly data on disbursements are available in FR's [9A, B, F, G, L, O, Q, T]. Quarterly not seasonally adjusted data are used as the seasonally adjusted estimates. Quarterly estimates are summed to calendar year estimates.

The advance quarterly estimate is an extrapolation using 2 months of *MTS* outlays as the indicator. FR disbursements data are used as they become available, generally by the final estimate.

Other durable goods.—Purchases of other durable goods—such as pumps, hand tools, general purpose computers [6A] and goods for the foreign military assistance program that are not military-specific in nature—are directly estimated. Quarterly data on disbursements for most other durable goods are available in FR's [9B C, D, G, H, I, M, N, O, R, S, T]. Quarterly data for the foreign military assistance pro-

gram are from BEA's balance of payments accounts [46]. Quarterly not seasonally adjusted data from both sources are used as the seasonally adjusted estimates. Quarterly estimates are summed to calendar year estimates.

The advance quarterly estimate is a judgmental extrapolation. FR disbursements and balance of payments accounts data are used as they become available, generally by the final estimate.

Petroleum products.—Most purchases of petroleum are directly priced using the number of gallons delivered and price paid per gallon from invoices summarized in monthly petroleum product reports (PPR's) [17]; the other purchases are directly estimated using disbursements data from FR's [9O]. The sum of purchases derived using the two methods is the estimate of petroleum purchases for the quarter. For both methods, not seasonally adjusted data are used as the seasonally adjusted estimates. Quarterly estimates are summed to calendar year estimates.

For the advance quarterly estimate of directly priced petroleum, quantities delivered and prices paid are judgmental extrapolations or, when available, based on PPR data. As the information becomes available, generally by the preliminary estimate, the quantity and price data are from the PPR's. For directly estimated petroleum, the advance estimate is a judgmental extrapolation. As the data become available, generally by the final estimate, estimates are based on FR disbursements data.

Ammunition.—Purchases of ammunition are derived using the directly priced method, with quantity data from unpublished data underlying the budget [4B-14] and price data from CCDR's [7], and the directly estimated method, with disbursements from FR's [9A, B, F, G, Q, T]. The sum of purchases derived using the two methods is the estimate of ammunition purchases for the quarter. For both methods, quarterly not seasonally adjusted data are used as the seasonally adjusted estimates. Quarterly estimates are summed to calendar year estimates.

The advance quarterly estimate of directly priced ammunition is based largely on scheduled deliveries and prices from supporting data to the budget [4B-14]. As they become available, CCDR data are used. The advance quarterly estimate of directly estimated ammunition is an extrapolation using 2 months of *MTS* outlays as the indicator. FR disbursements data are used as they become available, generally by the final estimate.

Other nondurable goods.—Purchases of other nondurable goods—such as food, drugs, and clothing—are directly estimated. For all except printing and for the foreign military assistance program, quarterly data on disbursements are in FR's [9B, G, O, T]. Quarterly estimates are summed to calendar year estimates. The quarterly estimates are seasonally adjusted using the Census X-11 procedure. The advance

quarterly estimate is a judgmental extrapolation. FR disbursements data are used as they become available, generally by the final estimate.

Printing purchases are based on annual CA data [6A], which are available by the first July revision. Purchases of other nondurable goods for the foreign military assistance program are from BEA's balance of payments accounts 46]. Quarterly seasonally adjusted estimates of printing and foreign military assistance purchases are interpolations without an indicator and, for the current estimates, judgmental extrapolations; the balance of payments accounts data are generally available by the final estimate.

Military compensation.—Compensation for active duty military personnel and for reserve personnel is estimated as the sum of two components: Wages and salaries, and supplements to wages and salaries. Coast Guard compensation is estimated as part of military compensation and is then removed from national defense and added to nondefense.

Wages and salaries.—Fiscal year estimates of wages and salaries for active duty and reserve personnel are derived from budget data [4A-2, 4B-1, and 13B, C, D, F, G], generally by the first July revision. Monthly estimates are interpolations of the fiscal year estimates using monthly not seasonally adjusted data on the number of personnel [13E] as the indicator for active duty personnel and using judgmental estimates of reserve wages and salaries as the indicator for reserve personnel. The estimates are then adjusted for pay raises. Monthly estimates are summed to quarterly and calendar year estimates.

Current monthly estimates of wages and salaries for active duty military personnel are extrapolations using the number of active duty military personnel as the indicator. Current monthly estimates of wages and salaries for reserve personnel are judgmental extrapolations. The estimates are then adjusted for pay raises.

Supplements to wages and salaries.—Supplements to military wages and salaries consist of the following employer contributions for social insurance: Old-age, survivors, hospital, and disability insurance; military retirement; veterans life insurance; workers' compensation; and military medical insurance for dependents of active duty military personnel. A description of the methodology used to estimate these employer contributions is discussed in the contributions for social insurance section of the receipts derivation. There are no other labor income items, such as health and life insurance, for military personnel.

Civilian compensation.—Civilian compensation is estimated as the sum of two components: Wages and salaries, and supplements to wages and salaries. Estimates of these components are made for the total Federal Government sector (excluding enterprises) and

then allocated to national defense and nondefense purchases.

Wages and salaries.—Calendar year estimates of civilian wages and salaries are primarily from Office of Personnel Management (OPM) data [13J], generally by the first July revision. These are supplemented by data from other agencies, such as the Department of Agriculture for county agricultural agents. Monthly seasonally adjusted estimates are interpolations without an indicator, with allowance for pay raises. Monthly estimates are summed to quarterly and calendar year estimates.

Current monthly estimates of Federal civilian wages and salaries are judgmental extrapolations, adjusted for pay raises. Monthly estimates are summed to quarterly estimates. Quarterly estimates are allocated to national defense and nondefense purchases using estimates of full- and part-time employment from OPM [13H, I] as the indicator.

Supplements to wages and salaries.—Supplements to civilian wages and salaries consist of employer contributions for social insurance and other labor income. Employer contributions for social insurance consist of the following: Old-age, survivors, disability, and hospital insurance, unemployment insurance, civilian employee retirement, and workers' compensation. A description of the methodology used to estimate these employer contributions is discussed in the contributions for social insurance section of the receipts derivation. Employer contributions are allocated to national defense and nondefense purchases in proportion to wages and salaries.

The other labor income component of supplements consists of the following: Health insurance, life insurance, judicial fees, payments to prison inmates, and the thrift plan. Annual estimates of other labor income are based largely on OPM data. Monthly seasonally adjusted estimates are interpolations without an indicator and judgmental extrapolations, with allowance for rate changes or other special factors. Civilian other labor income is allocated to national defense and nondefense purchases in direct proportion to wages and salaries.

Contractual research and development.—Purchases of contractual research and development (R&D) are directly estimated. Monthly outlays are available in the MTS for DOD activities and for Department of Energy atomic energy activities [77]. The data are adjusted to exclude grants-in-aid for research, which are not considered to be government purchases. In addition, expenditures for R&D performed in-house by DOD are excluded based on data from the National Science Foundation (NSF) [15]. (R&D performed in-house by DOD appears as purchases of employee compensation, equipment, materials, etc.—the items DOD buys from the private sector.) The seasonally adjusted

estimates are prepared using the Census X-11 procedure.

The advance quarterly estimate is an extrapolation using 2 months of *MTS* outlays as the indicator. For the final estimate, 3 months of *MTS* outlays are adjusted by NSF data.

Installation support.—Purchases of installation support services are estimated directly for 14 subcategories including electricity, natural gas, telephone, postage, housekeeping, and maintenance of real property and equipment. Quarterly expenditures for postage are available from the U.S. Postal Service [89] and for communications services from DOD's Communication Services Industrial Fund [47, 48].

Fiscal year reports [27, 36, 52] are available from DOD on expenditures for electricity, natural gas, steam, and water and sewerage and from the General Services Administration on leases on property [85, 86]. Fiscal year CA data [6A] are available for property maintenance, equipment maintenance, housekeeping services, and other types of support services. Seasonally adjusted estimates for other installation support purchases are interpolations without an indicator. Quarterly estimates are summed to the calendar year estimates.

The advance quarterly estimate is a judgmental extrapolation. FR disbursements data [9L, O] are used as they become available, generally by the final estimate.

Weapons support.—Purchases of weapons support services are directly estimated for 11 subcategories of depot maintenance and services for new weapons systems. Quarterly estimates of services for new weapons systems are derived as a percentage of disbursements for each major weapons system from FR data [9A, B, F, G, Q, T]. Quarterly estimates are summed to the calendar year estimates and are seasonally adjusted using the Census X-11 procedure. Fiscal year estimates for depot maintenance services are based on CA data [6A] and FR disbursements data [9D, I, R]. Quarterly seasonally adjusted estimates are interpolations without an indicator.

The advance quarterly estimate is a judgmental extrapolation. FR disbursements data are used as they become available, generally by the final estimate.

Personnel support.—Purchases of personnel support services are directly estimated for three subcategories—direct hire of foreign nationals, training and education, and consulting. Quarterly estimates for direct hire of foreign nationals are available from a survey conducted by DOD for BEA's balance of payments accounts. The quarterly estimates are summed to calendar year estimates and are seasonally adjusted using the Census X-11 procedure. Estimates of purchases for training and education services and for consulting are based on fiscal year CA data [6A]. Quarterly seasonally adjusted estimates are interpolations without an indicator.

The advance quarterly estimate generally is a judgmental extrapolation. BPA data on the hire of foreign nationals outside of the United States are used as they become available, generally by the final estimate.

Transportation of materiel.—Purchases of transportation services are directly estimated. Quarterly data on disbursements are available in various reports from the Military Sealift Command [66] and the Military Traffic Management Command [35]. Quarterly obligations incurred by other DOD agencies with responsibility for the transportation of materiel, which are assumed to equal disbursements, are available in FR's [9E, J, P, U]. Quarterly estimates are summed to the calendar year estimates and are seasonally adjusted using the Census X-11 procedure.

The advance quarterly estimate is a judgmental extrapolation. FR obligations data are used as they become available, generally by the final estimate.

Travel of persons.—Purchases of travel, including per diem expenses, are directly estimated. Quarterly data on disbursements are available in various reports from the Military Airlift Command [29]. Quarterly obligations incurred by other DOD agencies with responsibilities for the travel of persons, which are assumed to equal disbursements, are available in FR's [9E, J, P, U]. Not seasonally adjusted data are used as the seasonally adjusted estimates, and quarterly estimates are summed to calendar year estimates.

The advance quarterly estimate is a judgmental extrapolation. FR obligations data are used as they become available, generally by the preliminary estimate.

Other services.—Purchases of other services—largely services purchased for foreign military assistance, such as the training of foreign military personnel—are directly estimated. Quarterly estimates for foreign military assistance are from the balance of payments accounts [46]. Not seasonally adjusted data are used as the seasonally adjusted estimates, and quarterly estimates are summed to calendar year estimates.

The advance quarterly estimate is an extrapolation using 2 months of *MTS* outlays [77] as the indicator. The balance of payments accounts data are used as they become available, generally by the final estimate.

Military facilities.—Purchases of military facilities, such as troop housing and hangars, are recorded in the NIPA's on a work-put-in-place basis using the directly priced and directly estimated methods. For the directly priced purchases, data on the number of square feet and cost per square foot (as well as length of construction period) are available from construction project reports (CPR's) [5] submitted by contractors at the beginning and end of each contract. For the directly estimated purchases, quarterly disbursements are available in FR's [9A, B, F, G, L, O, Q, T]. Not seasonally adjusted data are used as the seasonally adjusted estimates, and quarterly estimates are summed to calendar year estimates.

The advance quarterly estimate for directly priced purchases is largely a judgmental extrapolation; CPR data are used as they become available. The advance estimate for directly estimated purchases is an extrapolation using 2 months of *MTS* outlays as the indicator. FR disbursements data are used as they become available, generally by the final estimate.

Other structures.—Purchases of other structures, which includes family housing and nuclear weapon factories, are recorded in the NIPA's on a work-put-in-place basis using the directly estimated method. Quarterly disbursements for family housing are available in FR's [9A, B, F, G, L, O, Q, T], and value put in place for other structures is from the Census Bureau *Current Construction Reports* [37]. Quarterly estimates are summed to calendar year estimates and are seasonally adjusted using the Census X-11 procedure.

The advance quarterly estimate for family housing is an extrapolation using 2 months of *MTS* outlays as the indicator; FR disbursements data are used as they become available, generally by the final estimate. The advance estimate for other structures is an extrapolation using 2 months of value-put-in-place data as the indicator; 3 months of data are available for the preliminary estimate.

Nondefense purchases

Total nondefense purchases of goods and services are derived by program from budget outlays as a part of the fiscal year analysis (see page 19). For most programs, nondefense purchases are derived as a residual after identifying all other types of expenditures. Quarterly not seasonally adjusted estimates are then derived on the basis of this fiscal year analysis; the fiscal year relationship of types of expenditures to total expenditures for a program is used to prorate quarterly budget outlays for that program as published in the *MTS*. The sum of the residual expenditures by program accounts for the bulk of nondefense purchases; a description of the procedure for the exception, the inventory change of the Commodity Credit Corporation (CCC), follows. These quarterly unadjusted estimates of nondefense purchases are summed to calendar year estimates.

Nondefense purchases other than CCC inventory change are seasonally adjusted at the level of detail shown in table II-5. Purchases for the strategic petroleum reserve, the decennial census, and a few other programs show no seasonality, and not seasonally adjusted data are used as the seasonally adjusted estimates. For estimates that show seasonality, the Census X-11 seasonal adjustment procedure is used. Pay raises are removed from the "all other purchases" category before seasonal adjustment and added back to the seasonally adjusted estimate in the same quarter as they occurred in the unadjusted data.

For the current quarterly estimates of nondefense purchases other than CCC inventory change, the advance estimates, with the exception of the estimates

of imputed financial services and compensation of employees, are based on 2 months of *MTS* outlays in conjunction with relationships derived in the fiscal year analysis. Three months of *MTS* outlays are available in time for the preliminary estimates.

The annual and quarterly seasonally adjusted estimates of nondefense purchases other than CCC inventory change are allocated to type of purchase—durable goods, nondurable goods, compensation, other services, and structures. This allocation is an essential step in the deflation of nondefense purchases and, therefore, will be discussed in that section.

Commodity Credit Corporation.—The nondefense purchases of the CCC consist of the CCC inventory change.⁴ The CCC inventory change is defined in the NIPA's to consist of direct purchases, sales, and donations of commodities plus the net change in commodity loans.⁵ The CCC inventory change has two parts—a "regular" inventory change, reflecting CCC transaction prices, and a valuation adjustment to take CCC transaction prices to market prices. The regular inventory change is based on fiscal year and monthly data from the Agricultural Stabilization and Conservation Service (ASCS), U.S. Department of Agriculture [23]. The prices used to estimate CCC loan and inventory transactions at current market prices are from *Agricultural Prices* [26] and from *Dairy Market Statistics: Annual Summary* [22]. The valuation adjustment is the difference between the CCC inventory change valued at transaction prices and CCC inventory change valued at current market prices.

For each of the 10 commodities shown in table II-5, the end-of-quarter quantities of collateral pledged for loans outstanding and of inventory are from the ASCS. The two quantities are summed to the total quantity for the commodity. The quarter-to-quarter quantity change is calculated and multiplied by the current market price for the commodity to obtain the CCC inventory change at market value for the commodity. For all other crops, the change in CCC transaction value is used as the CCC inventory change at market value.

An adjustment is made for the lag in posting transactions in the detailed records, using ASCS data on transactions not yet posted. The sum of the inventory change for each commodity, the inventory change for the all other crops portion, and the accounting adjustment is the total CCC inventory change.

4. In NIPA table 3.19, nondefense purchases of the CCC also include an imputation for donations of agricultural commodities to private domestic organizations. This imputation offsets the effect of the donation on the inventory change and yields the appropriate measure of CCC expenditures. The programs of the CCC and the NIPA treatment of those programs are discussed in "Special Note.—The CCC in the National Income and Product Accounts," SURVEY OF CURRENT BUSINESS 62 (January 1982): 6-7 and in "Federal Farm Programs for 1986-90," SURVEY OF CURRENT BUSINESS 66 (April 1986): 31-35.

5. Because they have a long history of being repaid, tobacco loans are not treated as purchases and CCC generally carries no tobacco inventory.

Estimates of CCC inventory change are prepared quarterly; the quarterly not seasonally adjusted estimates are summed to calendar year estimates.

For the quarterly seasonally adjusted estimates, a procedure is used that takes advantage of the commodity detail available. For the commodities shown in table II-5, the inventory change is derived as acquisitions less dispositions (with associated accounting adjustments).

Acquisitions are estimated first. For each commodity, the quantities associated with new loans and direct purchases made during the quarter are obtained from ASCS. The two quantities are summed to the total quantity of the commodity acquired during the quarter. This quantity is multiplied by the current market price for the commodity to obtain CCC acquisitions at market value for the quarter. For most commodities, the estimates of acquisitions are seasonally adjusted using the Census X-11 procedure. For all other crops, the CCC transaction value is used as the market value of acquisitions. The sum of the acquisitions developed for each commodity, for all other crops, and the accounting adjustment for commodity loans made and direct commodity purchases is the seasonally adjusted total of CCC commodity acquisitions.

The disposition of each CCC commodity is prepared by subtracting the inventory change for each commodity from the acquisition of the commodity. This method is also used to prepare the disposition for all other crops. Estimates of dispositions for most CCC commodities are seasonally adjusted using the Census X-11 procedure; for the other commodities and the accounting adjustments, quarterly not seasonally adjusted data are used as the seasonally adjusted estimates. The sum of these dispositions and the accounting adjustment for loan repayments and sales is the seasonally adjusted total of CCC commodity dispositions.

The seasonally adjusted estimates of CCC inventory change are derived by subtracting the seasonally adjusted total dispositions from the seasonally adjusted total acquisitions.

For the current quarterly estimates, the amount of ASCS data available varies from quarter to quarter, particularly for the third quarter, which is the close of the fiscal year. For the ASCS data that are not available, judgmental estimates are prepared.

Transfer payments to persons

Among the categories of expenditures, transfer payments to persons is the only category for which monthly as well as quarterly estimates are prepared. Thus, the second and third columns of table II-5 refer to source data for monthly estimates, which are summed to quarterly estimates. Two recurring features in the methodology for transfer payments to persons may be noted. First, source data generally include payments to all eligible recipients, regardless

of their residency. Thus, adjustments are generally needed to exclude transfer payments to persons living outside the United States from transfer payments to persons. Payments to eligible individuals living in foreign countries are included in transfer payments to foreigners, and payments to residents of U.S. territories and the Commonwealth of Puerto Rico, as noted earlier, are excluded from the NIPA's. Quarterly data for the adjustment for transfer payments to eligible individuals living in foreign countries are from BEA's balance of payments accounts; data for the adjustment of transfer payments to residents of territories and Puerto Rico are from a variety of sources. For these adjustments, data that are not monthly are prorated over the months by total benefit payments of that type. The second recurring feature is that many of the programs have cost-of-living adjustments (COLA's). Typically, these adjustments are tied to a specified change in the Consumer Price Index and mandated to be paid at the beginning of the calendar year. The effect of COLA's is excluded from the source data before seasonal adjustment and added back to the seasonally adjusted estimates.

Old-age, survivors, and disability insurance

The monthly total OASDI benefits are from the SSA [56]. These benefits include regular and retroactive payments (that is, payments resulting from the recalculation of the earnings base underlying benefits for recent retirees). Estimates of benefits to eligible individuals living in foreign countries and to residents of U.S. territories and Puerto Rico are subtracted. Quarterly estimates of benefits to foreigners are from BEA's balance of payments accounts [46]. Calendar year data on benefits to residents of U.S. territories and Puerto Rico are from the *Social Security Bulletin: Annual Statistical Supplement* [57]. Monthly estimates are summed to calendar year estimates.

Monthly estimates—except COLA's and retroactive payments—are seasonally adjusted using the Census X-11 procedure.

For the current monthly estimates, the first estimate is based on monthly data on payments from the SSA, when available; otherwise, the estimate is a judgmental extrapolation. Following estimates are based on the SSA payments data.

Hospital and supplementary medical insurance

Hospital and supplementary medical insurance benefits are the sum of monthly benefit outlays from the MTS for the two programs [77]. Estimates of benefits going to residents of U.S. territories and Puerto Rico are subtracted; the Health Care Financing Administration, Department of Health and Human Services, provides unpublished calendar year data on these benefits. Monthly estimates are summed to calendar year estimates.

Monthly seasonally adjusted estimates are interpolations of the calendar year estimates without an indicator.

Current monthly estimates are judgmental extrapolations guided by budget projections.

State unemployment insurance

State unemployment insurance programs provide three types of benefits—regular, extended, and reimbursable. In most States, regular benefits cover the first 26 weeks of unemployment. Extended benefits provide continued coverage—in most cases, for an additional 13 weeks—for qualified individuals who have exhausted regular benefits. Extended benefits are available only when a “triggering” formula activates the program for the particular State or when a national formula activates the program for the entire country. Regular and extended benefits are paid to eligible former employees of employers paying unemployment insurance contributions. Reimbursable benefits are paid under an alternative program available to State and local governments and to private non-profit organizations. Instead of paying unemployment insurance taxes, these employers may choose to reimburse the unemployment insurance trust fund for benefits paid to former employees.

Calendar year data on the three types of benefits are available from the Unemployment Insurance Service (UIS), Employment and Training Administration [63, 65]. Benefits to residents of U.S. territories and Puerto Rico, also from UIS, are subtracted from each type of benefit before the three are combined. Unpublished monthly data on benefits paid are provided by the UIS for both regular and extended benefits. These data include checks never cashed and count twice some benefits funded from more than one State. These data are used as an indicator to prorate the calendar year estimate (which excludes checks never cashed and double counting) for regular and extended benefits. Reliable monthly data on reimbursable benefits are not available; the calendar year reimbursable estimate is prorated over months by regular unemployment benefits.

The not seasonally adjusted data are affected by the weekly schedule of processing unemployment benefit checks and the occurrence of a holiday at the end of a month, when the processing of some checks is postponed until the next month. Adjustments are made to standardize the number of working days and to put benefits paid following an end-of-the-month holiday back into the preceding month. After these adjustments are made, the estimates are seasonally adjusted using the Census X-11 procedure. This approach is taken for regular and for reimbursable benefits; for extended benefits, not seasonally adjusted data are used as the seasonally adjusted estimates.

Current monthly regular and extended benefits are judgmental extrapolations, guided by cash withdrawals by States from the unemployment insurance trust fund (published in the *MTS*) and by unemploy-

ment rates published by the Employment and Training Administration [64] and the Bureau of Labor Statistics [60]. Reimbursable benefits are extrapolated using seasonally adjusted regular benefits as the indicator.

Railroad unemployment insurance

Monthly outlays for railroad unemployment insurance benefits are from the *MTS* [77]. Monthly estimates are summed to calendar year estimates. The estimates—except COLA's—are seasonally adjusted using the Census X-11 procedure.

For the current monthly estimates, the first estimate is a judgmental extrapolation and following estimates are based on *MTS* outlays.

Federal employees unemployment compensation

Federal employees unemployment compensation includes benefits for unemployed former civilian employees and for unemployed, newly discharged servicemen. Each program has benefits comparable to the regular and extended State unemployment insurance benefits. Estimates are made separately for the two programs using the same procedures and sources.

A fiscal year estimate of total benefits is provided by the OMB from details supporting the *Budget Appendix* [4A-2]; unpublished monthly benefit data are available from UIS. Estimates of benefits to residents of U.S. territories and Puerto Rico are subtracted; unpublished monthly data for payments to residents of U.S. territories and Puerto Rico are available from the UIS. Monthly data are summed to calendar year estimates.

The estimates are seasonally adjusted using the Census X-11 procedure. Current monthly estimates are judgmental extrapolations.

Special unemployment benefits

Special unemployment benefits were paid from 1975 to 1978 and from 1982 to 1985. These temporary benefits, authorized by legislation during periods of high unemployment, were paid to former employees of State and local governments and some unemployed farm and household workers, whose former employment was not covered under the unemployment insurance system, and to jobless workers who had exhausted their regular and extended benefits.

Unpublished monthly data for total benefits and for benefits paid to residents of U.S. territories and Puerto Rico are from the UIS. The latter are subtracted from total benefits. Monthly estimates are summed to calendar year estimates. Not seasonally adjusted data are used as the seasonally adjusted estimates.

Federal civilian employee retirement

Federal civilian employee retirement benefits are paid from the civil service retirement and disability fund, the foreign service retirement and disability fund, the judicial survivors fund, the Federal Re-

serve Board retirement fund, and the Tennessee Valley Authority (TVA) retirement program. In addition, retirement benefits are paid to the following: Former commissioned officers of the Public Health Service, retired Federal judges, former lighthouse service personnel and survivors, and certain former employees of the National Oceanic and Atmospheric Administration.

Monthly total outlays for civil service retirement and disability are from the *MTS* [77]. Nonbenefit outlays must be subtracted: Unpublished monthly outlays for administrative costs are available from the Fiscal Management Division, Office of Personnel Management (OPM); transfers to the foreign service retirement and disability trust fund are from the *MTS* [77]; and monthly estimates for other nonbenefit outlays are fiscal year totals from the *Budget Appendix* [4A-2] divided by 12. Estimates of benefits going to eligible individuals in foreign countries and to residents of U.S. territories and Puerto Rico are subtracted. Quarterly estimates of benefits to foreigners are from BEA's balance of payments accounts [46]. OPM provides unpublished annual data on benefits to residents of U.S. territories and Puerto Rico.

Foreign service retirement benefits are from the *MTS* [77]; monthly data are summed to calendar year estimates. Calendar year benefits for the Federal Reserve Board and the TVA are from the agencies [2 and 20, respectively]. Fiscal year estimates of the other retirement benefits are derived from budget data as part of the fiscal year analysis. Monthly estimates are interpolations of the fiscal year estimates without an indicator.

Estimates of civil service retirement benefits—except COLA's—are seasonally adjusted using the Census X-11 procedure. For the other benefit payments, not seasonally adjusted data are used as the seasonally adjusted estimates.

For the current monthly estimates, the first estimate is a judgmental extrapolation and following estimates are based on *MTS* outlays data for civil service and foreign service.

Military retirement

Military retirement benefits consist of payments to retired military and Coast Guard personnel; data for both are from the *MTS* [77]. Estimates of benefits going to residents of foreign countries, U.S. territories, and Puerto Rico are subtracted. For military retirees, quarterly estimates of benefits to foreigners are from BEA's balance of payments accounts [46], and benefits to residents of U.S. territories and Puerto Rico are from sample information published by DOD [49]. For Coast Guard retirees, quarterly estimates of benefits to foreigners are from BEA's balance of payments accounts [46].

Estimates of benefits for military retirees—except COLA's—are seasonally adjusted using the Census X-11 procedure. For Coast Guard retirees, not season-

ally adjusted data are used as the seasonally adjusted estimates.

For the current monthly estimates, the first estimate is a judgmental extrapolation and following estimates are based on *MTS* outlays data.

Railroad retirement

Monthly total outlays for railroad retirement benefits are from the *MTS* [77]. Estimates of benefits going to eligible individuals living in foreign countries and to residents of U.S. territories are subtracted. Quarterly estimates of railroad retirement benefits to foreigners are from BEA's balance of payments accounts [46]. Calendar year estimates of railroad retirement benefits to residents of U.S. territories and Puerto Rico are from the Railroad Retirement Board.

Not seasonally adjusted data are used as the seasonally adjusted estimates.

For the current monthly estimates, the first estimate is a judgmental extrapolation and following estimates are based on *MTS* outlays data.

Veterans life insurance

Unpublished monthly and calendar year payments data are provided by the Office of Budget and Finance in the Veterans' Administration (VA) for each of five programs [93]: National Service Life Insurance, U.S. Government Life Insurance, Service-disabled Veterans Life Insurance, Veterans Special Life Insurance, and Veterans Reopened Insurance. Transfer payments include claims paid by the funds and dividend payments to policyholders. Estimates of benefits going to eligible individuals living in foreign countries and to residents of U.S. territories and Puerto Rico are subtracted. Quarterly estimates of payments to foreigners are from BEA's balance of payments accounts [46]. Fiscal year estimates of payments to residents of U.S. territories and Puerto Rico are from the VA's *Annual Report* [92].

In most years, dividends are paid to policyholders in the month of their policy anniversary. In a few years, however, all dividends due in a calendar year have been paid early in the calendar year. When dividends are paid throughout the year, the seasonally adjusted estimates of the total of claims and dividends are prepared using the Census X-11 procedure. When dividend payments are accelerated, not seasonally adjusted data are used as the seasonally adjusted estimates.

For the current monthly estimates, the first estimate is a judgmental extrapolation and following estimates are based on VA payments data.

Workers' compensation

Unpublished monthly data for workers' compensation benefits are provided by the Employment Standards Administration, Department of Labor. Monthly estimates are summed to a calendar year estimate. Seasonally adjusted estimates are prepared by interpolation of the calendar year estimate—except benefit

increases—without indicator; the benefit increases are then added back to the appropriate month. The current monthly estimates are judgmental extrapolations guided by budget projections.

Military medical insurance

The Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) pays for medical care provided at nonmilitary facilities to retired military personnel and to dependents of active duty and retired military personnel. Benefits to dependents of active duty personnel are treated as benefits from social insurance funds. Benefits to retired military personnel and their dependents are included in other transfer payments to persons, but are discussed in the following paragraph.

The benefits to dependents of active duty personnel are treated as paid by a social insurance fund in order to make the compensation of military personnel comparable to the compensation of other government and private sector employees. A social insurance contribution—equal to the benefits paid—is imputed to the military employer. The imputed contribution is included in government receipts and in government expenditures; in the latter, it is included as compensation of military personnel in national defense purchases. Monthly benefits data are provided by DOD [50, 51], separately for retired personnel and their dependents and for dependents of active duty personnel. Monthly data are summed to quarterly and calendar year estimates.

Quarterly not seasonally adjusted data are used as the seasonally adjusted estimates. Monthly estimates are interpolations of the quarterly estimates without an indicator.

Current monthly estimates are judgmental extrapolations guided by budget projections.

Veterans pension and disability

Monthly total outlays for pension and disability benefits are from the *MTS* [77]. Benefits are usually paid on the first of the month, but when the first of the month is a weekend or holiday, the checks are paid on the previous working day. An adjustment is made to treat these early checks as if they had been paid in the following month. Unpublished data for the adjustment is provided by the Office of Budget and Finance in the VA. Benefits for wives, widows, and children of veterans, which are included in readjustment benefits in the budget data, are added to pension and disability benefits. Unpublished quarterly data for these smaller programs are provided by the Office of Budget and Finance; these quarterly data are divided by 3 to obtain monthly data. Estimates of benefits to eligible individuals living in foreign countries and to residents of U.S. territories and Puerto Rico are subtracted. Quarterly estimates of benefits to foreigners are from BEA's balance of payments accounts [46]. Fiscal year estimates of benefits to residents of U.S. territories and Puerto

Rico are from the VA's *Annual Report* [92]. Monthly data are summed to calendar year estimates.

Estimates—except COLA's—are seasonally adjusted using the Census X-11 procedure.

For the current monthly estimates, the first estimate is a judgmental extrapolation guided by budget projections and following estimates are based on *MTS* outlays data for veterans pensions and disability.

Veterans readjustment

Monthly total outlays for veterans readjustment benefits are from the *MTS* [77]. Benefits are usually paid on the first of the month, but when the first of the month is a weekend or holiday, the checks are paid on the previous working day. An adjustment is made to treat these early checks as if they had been paid in the following month. Unpublished data for the adjustment is provided by the Office of Budget and Finance in the VA. The previously discussed benefits for wives, widows, and children of veterans are subtracted. Unpublished quarterly data for these smaller programs are provided by the Office of Budget and Finance; these quarterly data are divided by 3 to obtain monthly data. Estimates of benefits to eligible individuals living in foreign countries and to residents of U.S. territories and Puerto Rico are subtracted. Quarterly estimates of benefits to foreigners are from BEA's balance of payments accounts [46]. Fiscal year estimates of benefits to residents of the territories and Puerto Rico are from the VA's *Annual Report* [92]. Monthly data are summed to calendar year estimates.

Calendar year estimates are interpolations using a judgmental indicator that reflects COLA's and trends in the number of beneficiaries.

Current monthly estimates are judgmental extrapolations guided by budget projections.

Food stamp benefits

Unpublished monthly total food stamp benefits and fiscal year benefits paid to residents of U.S. territories are provided by the Food and Nutrition Service (FNS), U.S. Department of Agriculture [24]. The fiscal year data on benefits paid to residents of U.S. territories are prorated over the months by total food stamp benefits and subtracted from the total. Monthly data are summed to calendar year estimates. Estimates—except COLA's—are seasonally adjusted using the Census X-11 procedure.

For the current monthly estimates, the first estimate is a judgmental extrapolation guided by budget projections and following estimates are based on data for total benefits from FNS.

Black lung benefits

Black lung benefits consist of payments by the SSA to persons who began receiving benefits before July 1, 1973, and payments made by the Department of Labor to persons who qualified after that date. For the SSA component, unpublished monthly benefits are provided by the Office of the Actuary, SSA; monthly

data are summed to a fiscal year total. This total is compared with a more accurate total from the *Budget Appendix* [4A-2], and the months are adjusted if necessary. The same procedure is followed for the Labor Department payments using unpublished monthly benefits from the Employment Standards Administration.

Not seasonally adjusted data are used as the seasonally adjusted estimates.

For the current monthly estimates, the first estimate is based on the monthly benefits data, when available; otherwise, the estimate is a judgmental extrapolation guided by budget projections. Following estimates are based on the monthly data.

Supplemental security income

Fiscal year supplemental security income (SSI) benefits are from the *Budget Appendix* [4A-2] and monthly benefits are from the *SSA Monthly Benefit Statistics* [56]. The fiscal year total is prorated over months by the SSA monthly benefits. Monthly data are summed to calendar year estimates.

In 1974, when a number of grant-in-aid programs were replaced by the SSI program, the Federal Government established a State-by-State benefit level and guaranteed that State costs would not be increased by implementation of the new benefit level. This result was accomplished by an additional Federal "hold-harmless" transfer payment that was to be phased out; the last such payments were in 1984. Fiscal year "hold-harmless" benefits were from the *Budget Appendix* [4A-2]. Monthly estimates were obtained by dividing the fiscal year estimate by 12; monthly estimates were summed to calendar year estimates.

Not seasonally adjusted data are used as the seasonally adjusted estimates.

For the current monthly estimates, the first estimate is a judgmental extrapolation and following estimates are based on benefits data from the SSA.

Earned income credit

Monthly outlays for the earned income credit are from the *MTS* [77] and are summed to calendar year estimates. Monthly seasonally adjusted estimates are prepared by dividing the calendar year total by 12. Current monthly estimates are judgmental extrapolations guided by budget projections.

Other transfer payments to persons

Other transfer payments include payments under numerous programs, such as to nonprofit institutions (exclusive of payments for research and development carried out by these institutions), educational aid to students, annuity payments, and trade adjustment assistance.

For payments to nonprofit institutions, the fiscal year payments are derived from budget data as part of the fiscal year analysis; quarterly estimates are derived from *MTS* data [77] using fiscal year relation-

ships. Quarterly estimates are summed to calendar year estimates.

For trade adjustment assistance, a fiscal year total is from the *Budget Appendix* [4A-2]. The fiscal year total is prorated over months by unpublished monthly benefit data from the Employment and Training Administration. The monthly estimates are summed to calendar year estimates. For Alaska native claims, fiscal year payments are derived from budget data as part of the fiscal year analysis. Quarterly estimates are derived from *MTS* data [77] using fiscal year relationships. Quarterly estimates are summed to calendar year estimates. For all others, fiscal year payments are derived from budget data as part of the fiscal year analysis. Monthly benefits for these programs are prepared by interpolating fiscal year estimates without an indicator. Monthly estimates are summed to quarterly and calendar year estimates.

For payments to nonprofit institutions, seasonally adjusted estimates are interpolations of the calendar year estimates without an indicator.

For Alaska native claims, monthly seasonally adjusted estimates are derived by dividing the calendar year total by 12. For all others, not seasonally adjusted data are used as the seasonally adjusted estimates.

For the current monthly estimates, the first estimate of other transfer payments is a judgmental extrapolation guided by budget projections and following estimates are based on unpublished trade adjustment assistance data from the Employment and Training Administration.

Transfer payments to foreigners

Federal Government transfer payments to foreigners are discussed in *Foreign Transactions*, BEA Methodology Paper Series MP-3 [41].

Grants-in-aid to State and local governments

Quarterly estimates are prepared for about 180 grant programs: Most are prepared using *MTS* outlays in conjunction with relationships derived from the fiscal year analysis; a few are fiscal year estimates divided by 4. Grants-in-aid to U.S. territories and Puerto Rico are subtracted, using information from the Department of Treasury [75], the Bureau of the Census [38], and administering agencies. Quarterly estimates, grouped as shown in table II-5, are summed to calendar year estimates.

Seasonally adjusted quarterly estimates for most groups of programs are prepared using the Census X-11 procedure or using not seasonally adjusted data as the seasonally adjusted estimates, as shown in table II-5. For a few programs with sporadic payment patterns, seasonally adjusted estimates are prepared by interpolating the calendar year totals over quar-

ters without an indicator. This procedure is used, for example, for the Federal payment to the District of Columbia; the payment is usually paid out in one or two installments, but the timing varies widely from year to year.

For the current quarterly estimates, the advance estimates are based on 2 months of *MTS* outlays [77] in conjunction with relationships derived in the fiscal year analysis. Three months of data are available for the preliminary estimates.

Net interest paid

Net interest paid is derived as interest paid less interest received, including imputed interest received. Interest paid consists of interest paid on public debt securities and other interest paid, largely for agency borrowings. The interest paid on public debt securities, as presented in the *MTS* [77], is in two parts: (1) Accrued interest on "public issues," and (2) cash interest paid on "special issues." The public issues interest is largely paid to the public, including foreigners, but is paid also to Federal funds such as the social security trust fund. The special issues interest is largely paid to Federal funds, but is also paid to the public, including foreigners. (As noted in discussing taxes, interest paid on tax refunds is included in NIPA taxes rather than in interest paid.) Interest received consists largely of interest on direct loans made by a large number of Federal agencies, such as the Department of Agriculture, Agency for International Development, and the Department of Housing and Urban Development.

Interest paid to persons and business

Interest paid to persons and business is derived from budget data as part of the fiscal year analysis.⁶ Data are not available to implement the methodology for the fiscal year analysis on a calendar year or quarterly basis. The approach used to derive quarterly estimates is to interpolate with an indicator a fiscal year estimate of public debt (public issues and special issues) interest paid to persons and business. The indicator is the *MTS* [77] public issues interest less interest paid to foreigners, the latter from BEA's balance of payments accounts [46]. A fiscal year estimate of other interest paid, derived as part of the fiscal year analysis, is interpolated over quarters without indicator. Quarterly estimates are summed to calendar years.

Quarterly seasonally adjusted estimates are prepared using the Census X-11 procedure.

For the current quarterly estimates, the advance estimate is based on 2 months of *MTS* data for public issues interest and a projection of foreign interest

paid. For public issues interest, the third month of *MTS* data is available for the preliminary estimate. For foreign interest, data are available for the final estimate.

Interest paid to foreigners

This estimate comes from BEA's balance of payments accounts, tables 1 and 2, line 29 [46]. The methodology is discussed in *Foreign Transactions*, BEA Methodology Paper Series MP-3 [41].

Monetary interest received from persons and business

Monetary interest received from persons and business is derived from budget data as part of the fiscal year analysis. The fiscal year estimates are interpolated quarterly without an indicator; quarterly estimates are summed to calendar year estimates. Not seasonally adjusted data are used as the seasonally adjusted estimates. Current quarterly estimates are judgmental extrapolations guided by budget projections.

Monetary interest received from foreigners

The starting point for this estimate is tables 1 and 2, line 14, from the balance of payments accounts [46]. It consists of interest received by the U.S. Government and the Federal Reserve banks. Unpublished data on the Federal Reserve banks' portion is subtracted from the published total to derive the NIPA estimates.

For the current quarterly estimates, the advance and preliminary estimates are projections. Data are available for the final estimate.

Imputed interest received

The estimate of imputed interest paid to the Federal Government is prepared as part of the estimates of imputed interest and associated service charges for the other sectors. It is the Federal Government share of imputed interest paid by commercial banks and by Federal Reserve banks. The share of imputed interest is based on the share of Federal deposits in total deposits at commercial banks and at Federal Reserve banks; the data on deposits are from the Federal Deposit Insurance Corporation [8] and the Board of Governors of the Federal Reserve System [1].⁷ Quarterly seasonally adjusted estimates are derived by interpolation, using seasonally adjusted flow of funds account data on holdings as the indicator [3]. Current estimates are judgmental extrapolations.

6. The fiscal year estimate is the sum of interest paid on public issues and special issues; less foreign interest paid; less interest paid to Federal funds, using interest received by those funds as a proxy; plus other interest paid to persons and business. Data, except for foreign interest paid, are from budget documents; the foreign interest paid is from BEA's balance of payments accounts [46].

7. For commercial banks, total payments of imputed interest equal the sum of monetary interest received on depositors' funds, dividends received, income received on direct lease financing, and imputed interest received from Federal Reserve banks less interest paid on deposits. For the Federal Reserve banks, total payments of imputed interest equal monetary interest received less current net earnings (after deduction of assessments for the Board of Governors) less dividends paid.

Subsidies less the current surplus of government enterprises

Subsidies

Federal Government subsidy payments are mainly in support of agriculture, housing, maritime shipping, railroads, air carriers, and mass transit. For all except agricultural subsidies, fiscal year estimates are derived from budget data as part of the fiscal year analysis. Most quarterly estimates are prorations of fiscal year estimates using MTS outlays as the indicator and, for the current estimates, judgmental extrapolations guided by budget projections. Quarterly estimates are summed to calendar year estimates.

Most agricultural subsidies are paid by the CCC; a few are paid by the Agricultural Stabilization and Conservation Service (ASCS). Fiscal year CCC subsidies are from subsidy detail in the *Report of Financial Condition and Operations of the Commodity Credit Corporation* [23]; quarterly estimates are from unpublished data from the ASCS, which administers the CCC programs. For other agricultural subsidies, fiscal year estimates are derived from budget data as part of the fiscal year analysis; quarterly estimates are derived from MTS outlays [77]. Quarterly estimates are summed to calendar years.

Subsidies are seasonally adjusted at the level of detail shown in table II-5. Seasonally adjusted estimates for most subsidies are prepared by interpolating without indicator and extrapolating judgmentally. Maritime construction subsidies are seasonally adjusted using the Census X-11 procedure. For the remaining subsidies, not seasonally adjusted data are used as the seasonally adjusted estimates.

The current quarterly estimates of CCC subsidies are based on payments data from the ASCS. Current estimates of most other subsidy payments are judgmental extrapolations guided by budget projections.

Current surplus of government enterprises

As of 1988, there are 20 Federal Government enterprises (Appendix II-B). Table II-5 shows the level of detail at which their current surplus is estimated quarterly. For the Postal Service, the Federal Housing Administration, and the Tennessee Valley Authority, fiscal year estimates are derived using agency financial reports [88, 90, 58, 19, respectively] as part of the fiscal year analysis. For all others, except the CCC, fiscal year estimates are derived from budget data as part of the fiscal year analysis. Quarterly estimates are interpolations without an indicator and, for the current estimates, judgmental extrapolations guided by budget projections; quarterly estimates are summed to calendar year estimates.

The current surplus of the CCC has two parts—a “regular” current surplus and a valuation adjustment to deal with the pricing of CCC inventory transactions. The fiscal year estimate of the “regular” current surplus is from detailed data on income and expenses

[23]. Quarterly estimates are interpolations without indicator and judgmental extrapolations, and they are summed to calendar year estimates. The valuation adjustment offsets the adjustment in nondefense purchases so that total expenditures are recorded, as required, at transaction prices. The derivation of market value inventory change is discussed in detail in the nondefense purchases section; the valuation adjustment is calculated at every step of the procedure described there.

Current surpluses are seasonally adjusted at the level of detail shown in table II-5. For the Postal Service, the calendar year estimate—except pay raises and postal rate increases—is interpolated over quarters without indicator; pay raises and postal rate increases are added to the seasonally adjusted estimates. The current surplus of other government enterprises except the CCC valuation adjustment is also interpolated without indicator. For the CCC valuation adjustment, seasonally adjusted estimates are prepared for acquisitions and dispositions of each commodity, either using the Census X-11 procedure or using not seasonally adjusted data as the seasonally adjusted estimate.

Current quarterly estimates of the CCC valuation adjustment are derived from the information used to estimate the CCC inventory change component of nondefense purchases. Current estimates of all other current surpluses are judgmental extrapolations guided by budget projections.

Wage accruals less disbursements

The estimates of wage accruals less disbursements, which convert wages and salaries from the accrual basis used in purchases and in current surplus of government enterprises to a payments basis in total expenditures, are prepared along with the other compensation estimates. Differences between accruals and disbursements arise because of retroactive pay raises—especially in recent years for Postal Service employees. Information on the amounts of retroactive pay raises is from affected agencies.

Surplus or deficit (–), national income and product accounts

This measure is the excess of total receipts over total expenditures; it represents the contribution of the Federal Government sector to sources of funds for other sectors.

The NIPA surplus or deficit measure is divided into two parts; the surplus or deficit generated by the excess of social insurance system receipts over the outlays of the systems, and the surplus or deficit resulting from all other government transactions. To accomplish this division, the part of purchases that represents administrative expenses of social insurance systems that are paid from system revenues must be identi-

fied. Data for administrative expenses are from the fiscal year analysis and the *MTS* [77] using relationships from the fiscal year analysis. These data are summed to quarters and calendar years. Quarterly seasonally adjusted estimates are interpolations of the annual estimates without an indicator; current quarterly estimates are judgmental extrapolations guided by budget projections.

The social insurance fund surplus is calculated as the sum of contributions and interest received by social insurance systems (the latter from the *MTS* [77]), less the sum of social insurance benefits and administrative expenses.

The other funds surplus or deficit equals the NIPA surplus or deficit minus the social insurance fund surplus.

Constant-Dollar Purchases of Goods and Services

Constant-dollar estimates of Federal Government purchases of goods and services are prepared using one of three methods. For compensation of employees and imputed financial services, base-year values are extrapolated by quantity indicators. For national defense purchases of a variety of goods and some services, for Commodity Credit Corporation purchases of farm commodities, and for certain purchases and sales of petroleum, quantities are directly priced (or valued). For other purchases, current-dollar estimates are deflated by (that is, divided by) suitable price indexes. For a substantial portion of national defense purchases of goods and services, the price indexes are prepared by BEA using information on prices paid by the Department of Defense (DOD).⁸ For other goods and services, the price indexes include those taken from the Census Bureau *Current Construction Reports* [37], BLS *CPI Detailed Report* [59], and BLS *Producer Prices and Price Indexes* [62] or constructed from average hourly earnings from BLS *Employment and Earnings* [60].

Table II-8 indicates which of the three methods is used for the components and provides an overview of the source data used. The source data shown for the July revision provide both annual and quarterly estimates; the source data for the current quarterly estimates are often less complete and less detailed. Tests are made for seasonality and in the relatively few cases where seasonality is present, the Census X-11 procedure is used.

8. As noted for current-dollar national defense purchases, many of the data sources were identified in a major project undertaken with DOD [44]. Prior to 1972, constant-dollar purchases were estimated at the total Federal Government level only; there was no distinction made between national defense and nondefense purchases. At the total level, 15 types of purchases—including military compensation, Commodity Credit Corporation inventory change, and structures—were extrapolated or deflated.

National defense purchases

As noted earlier, the "directly priced" method of preparing current-dollar estimates is preferred. For the pieces of constant-dollar purchases that are directly priced, the quantity data are the same as that used for current-dollar estimates. The appropriate base-year price is one that ensures that changes in quality are reflected in constant-dollar series as changes in quantity. The primary technique used to separate quality change from price change is specification pricing.

Specification pricing, as implemented for defense goods and services, consists of determining the relevant physical characteristics of an item and holding them constant over time. (For a more detailed discussion, see *Price Changes of Defense Purchases of the United States* [44].) As long as these characteristics are unchanged, any change in the amount paid for an item is a price change. When the characteristics change, the change is evaluated to determine the performance and cost effects. If the performance is enhanced, the associated quality increase is measured by the cost change.

Four principal procedures are used to calculate the amount by which the reported price for the base year must be adjusted to take into account changes in quality: Linking, direct comparison, producer cost, and overlap pricing. These procedures are described in terms of their use in the direct pricing method, but comparable procedures are also used to construct indexes of DOD prices that are used in deflation.

The **linking procedure** is used when the characteristics change and the entire difference in price (before and after the characteristic change) is assumed to be a quality difference. The adjustment is calculated as the ratio of the "new" to the "old" price. This procedure makes the value of the quality change in base-period prices directly proportional to the value of the quality change in current-period prices.

The **direct comparison procedure** is used when the characteristics change but there is no impact on performance so the entire difference in price is a price change. The adjustment is defined to be 1.0, and the ratio of the "new" to the "old" price is fully reflected as a price change.

The **producer cost procedure** consists of evaluating each characteristic change to an item to determine if it is a quality change. If it is a quality change, the cost to the producer of making the change is determined. The value of the quality change is defined as the cost to the producer of making the change in the current period. The adjustment is calculated as the ratio of the unreconfigured item plus the cost of quality changes to the unreconfigured item. Any difference in the price of an item, other than the cost of producing a quality change, is defined as a price change.

The **overlap pricing procedure** is essentially the same as linking, but "new" and "old" prices may have to be adjusted before the link is made. This technique

Table II-8.—Constant-Dollar Federal Government Purchases of Goods and Services: Sources of Estimates

Category	Method	Calendar year 1982 (Billions of dollars)	July revision ¹	Current quarterly estimates		
				Advance	Preliminary	Final
National defense...	Sum of detail.....	193.8				
Durable goods	Sum of detail.....	49.2				
Aircraft.....	Directly priced: Quantities	7.4	PCR's	Budget or, when available, PCR's.	More PCR's.....	Many PCR's.
	Prices		CCDR's	Budget or, when available, CCDR's.	More CCDR's	Many CCDR's.
Missiles	Deflation: DOD prices.	9.4	ICS and aircraft IPD's.	Aircraft IPD's	Aircraft IPD's	Aircraft IPD's.
	Directly priced: Quantities		PCR's	Budget or, when available, PCR's.	More PCR's.....	Many PCR's.
	Prices	2.0	CCDR's	Budget or, when available, CCDR's.	More CCDR's	Many CCDR's.
	Deflation: DOD prices.		ICS and missiles IPD's.	Missiles IPD's	Missiles IPD's	Missiles IPD's.
Ships	Deflation: Shipyard prices for "frozen ship".	3.4	Shipyard prices	Extrapolated judgmentally or, when available, shipyard prices.	Extrapolated judgmentally or, when available, shipyard prices.	Extrapolated judgmentally or, when available, shipyard prices.
	Directly priced: Quantities		PCR's	Budget or, when available, PCR's.	More PCR's.....	Many PCR's.
	Prices .....	.2	CCDR's	Budget or, when available, CCDR's.	More CCDR's	Many CCDR's.
	Deflation: Proxy prices.		PPI's.....	2 mos. PPI's.....	3 mos. PPI's.....	3 mos. PPI's.
Vehicles.....	Directly priced: Quantities	1.7	PCR's	Budget or, when available, PCR's.	More PCR's.....	Many PCR's.
	Prices		CCDR's	Budget or, when available, CCDR's.	More CCDR's	Many CCDR's.
	Deflation: DOD prices.	1.2	ICS and vehicles IPD's.	Vehicles IPD's	Vehicles IPD's	Vehicles IPD's.
	Deflation: DOD prices.		ICS	2 mos. PPI's.....	3 mos. PPI's.....	3 mos. PPI's.
Electronic equipment..	Deflation: Proxy prices.	2.5	PPI's.....	2 mos. PPI's.....	3 mos. PPI's.....	3 mos. PPI's.
	Deflation: DOD prices.		ICS	2 mos. PPI's.....	3 mos. PPI's.....	ICS.
Other equipment	Deflation: Proxy prices.	2.4	PPI's.....	2 mos. PPI's.....	3 mos. PPI's.....	3 mos. PPI's.
	Deflation: DOD prices.		ICS	2 mos. PPI's.....	3 mos. PPI's.....	3 mos. PPI's.
Other durable goods ..	Deflation: DOD prices.	5.4	PPI's/BEA computer price index.	2 mos. PPI's/BEA computer price index.	3 mos. PPI's/BEA computer price index..	3 mos. PPI's/BEA computer price index.
	Deflation: Proxy prices.					
Nondurable goods	Sum of detail.....	13.6				
Petroleum products....	Directly priced.....	8.1	PPR's	Extrapolated judgmentally or, when available, PPR's.	More PPR's	PPR's.
	Deflation: DOD prices.		Petroleum IPD's	Petroleum IPD's	Petroleum IPD's	Petroleum IPD's.
Ammunition	Directly priced: Quantities .....	.2	Budget data.....	Budget data.....	Budget data.....	Budget data.
	Prices		CCDR's	Budget or, when available, CCDR's.	More CCDR's	Many CCDR's.
	Deflation: DOD prices.	1.8	ICS	2 mos. PPI's.....	3 mos. PPI's.....	3 mos. PPI's.
	Deflation: Proxy prices.		PPI's.....	2 mos. PPI's.....	3 mos. PPI's.....	3 mos. PPI's.
Other nondurables	Deflation: DOD prices.	1.1	ICS	2 mos. PPI's.....	3 mos. PPI's.....	3 mos. PPI's.
	Deflation: Proxy prices.		PPI's.....	2 mos. PPI's.....	3 mos. PPI's.....	3 mos. PPI's.

See footnotes at end of table.

Table II-8.—Constant-Dollar Federal Government Purchases of Goods and Services: Sources of Estimates—
Continued

Category	Method	Calendar year 1982 (Billions of dollars)	July revision ¹	Current quarterly estimates		
				Advance	Preliminary	Final
Services	Sum of detail.....	127.1				
Compensation	Sum of detail.....	84.0				
Military compensation.	Extrapolation	55.0	Employment by rank and length of service from MR.	2 mos. employment from MR.	3 mos. employment from MR.	3 mos. employment from MR.
	Deflation: DOD prices.	1.6	Compensation report.	Compensation report.	Compensation report.	Compensation report.
Civilian compensation.	Extrapolation	27.4	OPM employment (by grade and step) and average hours worked.	OPM employment	OPM employment	OPM employment.
Other services	Sum of detail.....	43.2				
Contractual research and development.	Deflation: DOD and proxy prices.	16.3	R&D contractor prices/3 mos. PPI's.	Extrapolated judgmentally and 2 mos. PPI's.	R&D contractor prices/3 mos. PPI's.	R&D contractor prices/3 mos. PPI's.
Installation support.	Deflation: DOD prices.	3.2	Contracts	Contracts	Contracts	Contracts.
	Deflation: Proxy prices.	8.8	3 mos. CPI's/PPI's/AHE's/ER's.	2 mos. CPI's/PPI's/AHE's/ER's.	3 mos. CPI's/PPI's/AHE's/ER's.	3 mos. CPI's/PPI's/AHE's/ER's.
Weapons support ..	Deflation: DOD prices.	3.0	Contracts	Contracts	Contracts	Contracts.
	Deflation: Proxy prices.	2.5	AHE's	2 mos. AHE's	3 mos. AHE's	3 mos. AHE's.
Personnel support ..	Deflation: DOD prices.	2.0	Contracts/ER's	Contracts/foreign wage rates/ER's.	Contracts/foreign wage rates/ER's.	Contracts/foreign wage rates/ER's.
	Deflation: Proxy prices.	1.6	AHE	2 mos. AHE	3 mos. AHE	3 mos. AHE.
Transportation of materiel.	Deflation: DOD prices.	3.2	MSC/MTMC	MSC/MTMC	MSC/MTMC	MSC/MTMC.
Travel of persons....	Deflation: DOD and proxy prices.	2.6	MTMC/GSA/CPI's	MTMC/GSA/2 mos. CPI's.	MTMC/GSA/3 mos. CPI's.	MTMC/GSA/3 mos. CPI's.
Other.....	Deflation: Proxy prices.	(*)	3 mos. AHE's	2 mos. AHE's	3 mos. AHE's	3 mos. AHE's.
Structures	Sum of detail.....	3.9				
Military facilities	Directly priced .....	.7	CPR's	Judgmentally and CPR's.	More CPR's	Many CPR's.
	Deflation: DOD prices.	1.6	Military facility IPD/ER's.	Military facility IPD/2 mos. ER's.	Military facility IPD/3 mos. ER's.	Military facility IPD/3 mos. ER's.
Other structures	Deflation: Proxy prices.	1.6	Private-sector cost indexes/Federal Highway Admin./ER's.	Private-sector cost indexes/Federal Highway Admin./2 mos. ER's.	Private-sector cost indexes/Federal Highway Admin./3 mos. ER's.	Private-sector cost indexes/Federal Highway Admin./3 mos. ER's.

See footnotes at end of table.

Table II-8.—Constant-Dollar Federal Government Purchases of Goods and Services: Sources of Estimates—
Continued

Category	Method	Calendar year 1982 (Billions of dollars)	July revision ¹	Current quarterly estimates		
				Advance	Preliminary	Final
Nondefense	Sum of detail.....	78.9				
Durable goods	Sum of detail.....	3.1				
Medical equipment.....	Deflation: VA prices.	(*)	ICS	2 mos. PPI's.....	3 mos. PPI's.....	3 mos. PPI's.
Other durable goods ..	Deflation: Proxy prices.	3.1	PPI's/BEA computer price index.	2 mos. PPI's/BEA computer price index.	3 mos. PPI's/BEA computer price index.	3 mos. PPI's/BEA computer price index.
Nondurable goods	Sum of detail.....	14.9				
Commodity Credit Corporation.	Directly priced:	9.0				
	Quantities		ASCS	1 mo. ASCS.....	2 mos. ASCS	3 mos. ASCS.
	Prices		NASS/AMS.....	1 mo. NASS/AMS	2 mos. NASS/AMS.....	3 mos. NASS/AMS.
	Deflation: Proxy prices.	.2	PRF	2 mos. PRF	3 mos. PRF	3 mos. PRF.
Other nondurable goods.	Sum of detail.....	5.7				
Strategic petroleum reserve purchases.	Directly priced.....	2.2	DOE	2 mos. DOE	3 mos. DOE	3 mos. DOE.
Naval petroleum reserve sales.	Directly priced.....	-1.6	DOE	2 mos. DOE	3 mos. DOE	3 mos. DOE.
Other.....	Deflation: Proxy prices.	5.1	PPI's.....	2 mos. PPI's.....	3 mos. PPI's.....	3 mos. PPI's.
Services	Sum of detail.....	54.3				
Compensation	Extrapolation	33.1	OPM employment (by grade and step) and average hours worked.	OPM employment	OPM employment	OPM employment.
Other services.....	Sum of detail.....	21.2				
Travel and transportation.	Deflation: Proxy prices.	1.1	National defense IPD's.	National defense IPD's.	National defense IPD's.	National defense IPD's.
Financial services...	Deflation: Proxy prices.	.4	Extrapolated by paid employee hours.	Extrapolated by paid employee hours.	Extrapolated by paid employee hours.	Extrapolated by paid employee hours.
Other.....	Deflation: Proxy prices.	19.7	CPI's/PPI's/AHE's	2 mos. CPI's/PPI's/AHE's.	3 mos. CPI's/PPI's/AHE's.	3 mos. CPI's/PPI's/AHE's.
Structures	Deflation: Proxy prices.	6.6	Private-sector cost indexes/Federal Highway Admin./ER's.	Private-sector cost indexes/Federal Highway Admin./ER's.	Private-sector costs indexes/Federal Highway Admin./ER's.	Private-sector cost indexes/Federal Highway Admin./ER's.

* Less than \$0.05 billion.

1. The estimates for later revisions have the same sources.

AHE Average hourly earnings of production workers.
AMS Agricultural Marketing Service, U.S. Department of Agriculture.
ASCS Agricultural Stabilization and Conservation Service, U.S. Department of Agriculture.
CCDR Contract control documentation reports.
CPI Consumer price index.
CPR Construction project reports.
DOE U.S. Department of Energy.
ER Exchange rate.
GSA General Services Administration.
ICS Inventory control system.
IPD Implicit price deflator.
MR U.S. Department of Defense manpower reports.
MSC Military Sealift Command.
MTMC Military Traffic Management Command.
NASS National Agricultural Statistics Service, U.S. Department of Agriculture.
OPM Office of Personnel Management.
PCR Production control report.
PPI Producer price index.
PPR Petroleum products report.
PRF Index of prices received by farmers for crops.
R&D Research and development.

is used primarily for new weapons systems, for which the effects of the progress curve of "old" and "new" are pronounced; the progress, or learning, curve depicts the high prices of a new system that are associated with low initial labor productivity and the subsequent rapid price decline as productivity increases. The overlap pricing procedure uses the price of the new component at a point on the learning curve when price change due to learning does not influence the difference in relative prices. (For example, it is assumed that learning has ceased to be a major influence by the 100th unit of fighter aircraft.) As the price for the old component, it uses a point from the last normal production run—that is, before production shutdown costs are a major influence on the price of the old component. The price change from the overlap point for the old component to the designated unit of the new component is then removed from the price of the new unit. The adjusted price for the new unit can then be linked to the overlap price for the old unit. Any difference in price between the old and new components is a quality difference and is used to calculate the adjustment factor as in a regular link.

Two DOD sources of data are widely used in constructing base-year prices and price indexes. CCDDR's were described in the section on current dollars. The other is the inventory control system:

- **Inventory Control System (ICS):** Data on quantities and prices of items purchased by government supply centers—that is, the organizations charged with centralized purchasing and supplying of goods needed by the civilian and military agencies—are available from several machine readable files [12]. For example, "Procurement History File" (JO41) [12A] provides quantities and prices for items purchased by the Air Force Logistics Command. Items in the ICS are coded by a 13-digit National Stock Number (NSN), which—as a unique identifier for each item purchased by the Federal Government—is based on extremely detailed specifications. The data are quarterly and are generally available by the first July revision.

Table II-9 shows the price indexes or extrapolators at the level of detail at which the constant-dollar estimates are prepared. The level of detail often reflects the DOD agency making the purchase as well as the type of good or service.

Durable goods

Aircraft.—Constant-dollar purchases of aircraft are prepared using two methods, both with DOD prices. Most are prepared by direct pricing; the others are prepared by deflation using indexes constructed from DOD prices.

For the estimates that are directly priced, data on the average price paid for a component delivered during 1982 are from CCDDR's [7]. This price is adjusted to reflect the cost (in 1982 dollars) of all configuration

changes deemed to be quality changes. The adjustment, following the producer cost procedure, draws on information in the CCDDR's on the cost of implementing an engineering change order (ECO), which is required for any configuration change to an aircraft system.

For the estimates that are deflated (that is, for the current-dollar estimates prepared using the ratio method), data from the ICS are available for many other aircraft components and related equipment [12A, B]. The data are used to construct price indexes for purchases by military service. Because the specifications for a NSN, which is the code used in the ICS, are extremely detailed, adjustments to the base-year price are not needed for a given NSN; a linking procedure is used for NSN items that are not purchased in the base year but are purchased in at least 2 other years. For the purchases for which ICS data are not available, IPD's derived from the directly priced estimates are used.

For the advance quarterly estimates, quantities and prices (including estimates of ECO costs) for the directly priced estimates are based largely on scheduled deliveries and prices from unpublished data underlying the budget [4B-2, -5, -15]. Data from PCR's [18A, B, C, F, G] and CCDDR's are incorporated in the estimates as they become available. The aircraft IPD's derived from the directly priced estimates are used for the estimates that are deflated.

Missiles.—Constant-dollar purchases of missiles are prepared using two methods, both with DOD prices. Most are prepared by direct pricing; the base-year price is constructed in the same way as for aircraft. The others are prepared by deflation using indexes constructed from DOD prices for missiles; the price indexes used are a combination of those constructed, in the same way as for aircraft, from ICS data [12A, B] and from IPD's derived from the directly priced estimates.

For the advance quarterly estimates, quantities and prices (including estimates of ECO costs) for the directly priced estimates are based largely on scheduled deliveries and prices from unpublished data underlying the budget [4B-3, -6, -12, -13]. Data from PCR's [18A, B, C, D] and CCDDR's [7] are incorporated as they become available. The missiles IPD's derived from the directly priced estimates are used for the estimates that are deflated.

Ships.—Constant-dollar purchases of ships are prepared using three methods. Estimates of a small part of government-furnished equipment are prepared by direct pricing; estimates of the rest of this equipment are prepared by deflation using seven PPI's [62]. Estimates of ship construction and conversion (including the ships exported under the foreign military sales program) by private shipyards are prepared by deflation. The index is constructed using what is called the "frozen ship method." The design of a specific ship (usually the second ship) in a class—for example, the design of a nuclear submarine in the Los Angeles

Table II-9.—Methods Used In the Derivation of Constant-Dollar National Defense Purchases of Goods and Services

Category	Method for July revision	1982 weight (percent)	Category	Method for July revision	1982 weight (percent)
National defense purchases.	IPD calculated from the detail below.	100.000	Other durable goods	IPD calculated from the detail below.	4.613
Durable goods	IPD calculated from the detail below.	25.371	Army stock fund	Deflation: DOD prices .....	.840
			Air Force stock fund	Deflation: DOD prices .....	.852
			Navy stock fund	Deflation: DOD prices .....	.066
Military equipment	IPD calculated from the detail below.	20.758	Defense stock fund	Deflation: DOD prices .....	.050
			General-purpose	BEA computer price index .....	.295
			Other ²	Deflation by 13 PPI's	2.510
Aircraft	IPD calculated from the detail below.	8.663	Nondurable goods	IPD calculated from the detail below.	7.018
Army new	Direct pricing .....	.248	Petroleum products	IPD calculated from the detail below.	4.749
Army other	Deflation: DOD prices .....	.128	Jet fuels	Direct pricing	2.566
Air Force new	Direct pricing .....	.007	Gasoline	Direct pricing .....	.202
Air Force other	Deflation: DOD prices .....	.289	Diesel and heating oil	Direct pricing	1.390
Navy new	Direct pricing	2.188	Other fuels	Deflation: DOD prices .....	.591
Navy other	Deflation: DOD prices .....	.189	Ammunition	IPD calculated from the detail below.	1.190
	Deflation: DOD prices .....	.022	Army	Deflation: DOD prices .....	.631
	Deflation: DOD prices	2.824	Air Force	Deflation: DOD prices .....	.235
	Deflation: DOD prices	1.301	Torpedoes	Direct pricing .....	.191
	Deflation: DOD prices .....	.535	Navy, except torpedoes	Deflation by 8 PPI's .....	.091
	Deflation: DOD prices .....	.052	Marine Corps	Deflation by 8 PPI's .....	.042
	Deflation: DOD prices .....	.880	Other nondurable goods	IPD calculated from the detail below.	1.079
Missiles	IPD calculated from the detail below.	2.923	Clothing and textiles	Deflation by 4 PPI's .....	.392
Army new	Direct pricing .....	.306	Subsistence	Deflation by 6 PPI's .....	.112
Army other	Deflation: DOD prices .....	.162	Other defense stock fund	Deflation: DOD prices .....	.343
Air Force new	Direct pricing .....	.001	Army stock fund	Deflation: DOD prices .....	.068
Air Force other	Deflation: DOD prices .....	.145	Printing	Deflation: DOD prices .....	.106
Air Force space	Direct pricing .....	.234	Military assistance program	Deflation by 25 PPI's .....	.058
Air Force other programs	Deflation: DOD prices .....	.199	Services	IPD calculated from the detail below.	65.592
Navy new	Deflation: DOD prices .....	.118	Compensation of employees.	IPD calculated from the detail below.	43.319
Navy other	Deflation: DOD prices .....	.270	Military	Base-year value extrapolated by active duty personnel by rank (10 for officers, 4 for warrant officers, and 9 for enlisted), by cadets, and by reserves.	814
Marine Corps	Deflation: DOD prices .....	.606		Deflation: DOD prices	14.116
Ships	IPD calculated from the detail below.	3.080	Civilian	Base-year value extrapolated by employment by grade and step and by hours worked.	22.273
Private shipyards	Shipyard prices for "frozen ship".	1.914	Other services	IPD calculated from the detail below.	8.405
Government-furnished ship equipment	Direct pricing .....	.103	Contractual research and development	IPD calculated from the detail below.	7.127
Foreign military sales	Deflation by 7 PPI's	1.198	Department of Defense	Deflation: DOD and proxy prices	1.278
Vehicles	Deflation: Frozen ship IPD	-.135	Department of Energy	Deflation: DOD and proxy prices	6.202
Army combat	IPD calculated from the detail below.	1.498	Installation support	IPD calculated from the detail below.	1.132
Army noncombat	Direct pricing .....	.807	Utilities	IPD calculated from the detail below.	.801
Air Force noncombat	Deflation: DOD prices .....	.419	Electricity	Deflation by 15 PPI's and 2 ER's .....	.237
Navy noncombat	Direct pricing .....	.043	Natural gas	Deflation by 1 CPI .....	.073
Marine Corps combat	Deflation: DOD prices .....	.078	Water and sewage	Deflation by 1 CPI and 3 ER's .....	.021
Marine Corps noncombat	Direct pricing .....	.006	Steam and hot water	Deflation by 1 CPI and 2 ER's .....	.754
Electronic equipment	Deflation: DOD prices .....	.085	Communication	IPD calculated from the detail below.	.104
Air Force	Deflation: DOD prices .....	.013	Postage	Deflation by 20 PPI's .....	.378
Army, Navy, and Marine Corps	Deflation: DOD prices .....	.019	Local telephone	Deflation by 1 PPI .....	.272
Other equipment	Deflation: DOD prices .....	.028	Other	Deflation: DOD prices	
Army	IPD calculated from the detail below.	1.596			
Air Force	Deflation: DOD prices .....	.330			
Army small arms	Deflation by 4 PPI's	1.266			
Navy and Marine Corps small arms	IPD calculated from the detail below.	2.998			
Other	Deflation: DOD prices .....	.337			
	Deflation: DOD prices	1.321			
	Deflation: DOD prices .....	.118			
	Deflation by 1 PPI .....	.096			
	Deflation by 13 PPI's	1.126			

Table II-9.—Methods Used in the Derivation of Constant-Dollar National Defense Purchases of Goods and Services—Continued

Category	Method for July revision	1982 weight (percent)	Category	Method for July revision	1982 weight (percent)
Other.....	IPD calculated from the detail below.	4.316	Transportation of materiel.	IPD calculated from the detail below.	1.651
Housekeeping	Deflation by 1 AHE and 1 ER.	.424	Air	Deflation: DOD prices .....	.076
Equipment maintenance.	Deflation by 1 AHE.....	.669	Sea	Deflation: DOD prices .....	.540
Property maintenance.	Deflation: DOD prices and 3 ER's.	1.365	Rail	Deflation: DOD prices .....	.101
Rental of property	Deflation by 1 AHE.....	.163	Truck.....	Deflation: DOD prices .....	.897
Leased equipment	Deflation by 1 AHE.....	.263	Terminal services	Deflation: DOD prices .....	.037
Contractor-operated facilities.	Deflation by 7 AHE's	1.242	Travel of persons	IPD calculated from the detail below.	1.348
Other	Deflation by 5 AHE's and 1 ER.	.190	Air	Deflation: DOD prices .....	.628
Weapons support.....	IPD calculated from the detail below.	2.835	Bus and rail	Deflation: DOD prices .....	.031
Depot maintenance	IPD calculated from the detail below.	2.188	Reimbursable travel.....	Deflation: DOD, OPM, and proxy prices.	.689
Army.....	Deflation: DOD prices .....	.191	Other ²	Deflation by 1 AHE.....	-.024
Air Force	Deflation by 4 AHE's .....	.657	Structures	IPD calculated from the detail below.	2.019
Navy.....	Deflation: DOD prices	1.340	Military facilities.....	IPD calculated from the detail below.	1.209
Procurement services...	IPD calculated from the detail below.	.647	Domestic new construction.	Direct pricing .....	.298
Aircraft.....	Deflation by 2 AHE's .....	.335	Other	Deflation: DOD prices and 3 ER's.	.911
Missiles	Deflation by 2 AHE's .....	.098	Other structures	IPD calculated from the detail below.	.810
Navy ships	Deflation by 2 AHE's .....	.119	Family housing	Deflation by Census Bureau index for one-family houses sold and 3 ER's.	.467
Army weapons	Deflation by 2 AHE's .....	.095	Nuclear facilities	Deflation by a composite of 3 construction cost indexes.	.344
Personnel support	IPD calculated from the detail below.	1.856	Net purchases of used structures.	Deflation: IPD for new nonresidential construction.	-.001
Training and education.	Deflation: DOD prices .....	.156			
Consulting.....	Deflation by 1 AHE.....	.850			
Foreign nationals	Deflation: DOD prices and 10 ER's.	.850			

1. The estimates for later revisions have the same sources.

2. Other durable goods and other services include purchases under the military assistance program.

Note.—Weights may not sum to category totals because of rounding. A list of the price indexes used is available upon request from BEA.

AHE Average hourly earnings.
CPI Consumer price index.
DOE U.S. Department of Energy.
ER Exchange rate.
GSA General Services Administration.
IPD Implicit price deflator.
OPM Office of Personnel Management.
PPI Producer price index.

class—is frozen. A shipyard that has produced this class of ship is then asked to re-price the design using the current-period wage structure and technology. Any change in the price calculated for the ship is a price change. These estimates are used to construct a price index. Currently, five frozen ships are in the sample.

For the advance quarterly estimates, quantities and prices (including estimates of ECO costs) for the directly priced government-furnished equipment are based largely on scheduled deliveries and prices from unpublished data underlying the budget [4B-16]. Data from PCR's [18E] and CCDR's [7] are incorporated as they become available. Two months of PPI's are available for the other government-furnished equipment; the third month is available for the preliminary estimate. For the part that is estimated using the frozen ship method, all current quarterly estimates of prices are judgmental extrapolations or, when available, based on shipyard prices.

The current-dollar estimates of foreign military sales are deflated using the IPD calculated using the frozen ship method.

Vehicles.—Constant-dollar purchases of vehicles are prepared using two methods, both with DOD prices. Most are prepared by direct pricing; the base-year price is constructed in the same way as for aircraft. The others are prepared by deflation using indexes constructed from DOD prices; the price indexes used are a combination of those constructed, in the same way as for aircraft, from ICS data [12A, B, C] and from IPD's derived from the directly priced estimates.

For the advance quarterly estimates, quantities and prices (including estimates of ECO costs) for the directly priced estimates are based largely on scheduled deliveries and prices from unpublished data underlying the budget [4B-7, -8, -9, -10, -11]. Data from PCR's [18C] and CCDR's [7] are incorporated as they become available. The vehicles IPD's derived from the directly priced indexes are used for the estimates that are deflated.

Electronic equipment.—Constant-dollar purchases of electronic equipment are prepared by deflation. Some are deflated using indexes constructed from DOD prices available in the ICS [12A, B]; most are deflated using four PPI's [62].

For the current quarterly estimates, all purchases of electronic equipment are deflated using four PPI's. Two months of PPI's are available for the advance estimate; the third month is available for the preliminary estimate.

Other equipment.—Constant-dollar purchases of other equipment, such as training equipment, are prepared by deflation. Some are deflated using indexes constructed from DOD prices in the ICS [12A, B]; the rest are deflated using 14 PPI's [62].

For the current quarterly estimates, all purchases of other equipment are deflated using 14 PPI's. Two months of PPI's are available for the advance estimate; the third month is available for the preliminary estimate.

Other durable goods.—Constant-dollar purchases of other durable goods are prepared by deflation. Some are deflated using indexes constructed from DOD prices from the ICS [12A, B, D]. Over one-half are deflated using 13 PPI's [62]. Finally, general-purpose computers are deflated using the BEA computer price index [43, 45].

For the current quarterly estimates, all purchases of other durable goods except computers are deflated using 13 PPI's. Two months of PPI's are available for the advance estimate; the third month is available for the preliminary estimate. For computers, the BEA computer price index is used.

Nondurable goods

Petroleum products.—Constant-dollar purchases of petroleum are prepared using two methods. Most are prepared by direct pricing; the prices, as well as the quantities, are from monthly petroleum product reports (PPR's) [17], which use the NSN codes. The others are prepared by deflation using indexes constructed from DOD prices—specifically, the combined IPD derived from the directly priced estimates.

For the advance quarterly estimates, quantities and prices for the estimates that are directly priced are judgmental or, when available, from PPR's. PPR's are available for the preliminary estimate. The combined petroleum IPD derived from the directly priced estimates is used for the estimates that are deflated.

Ammunition.—Constant-dollar purchases of ammunition are prepared using two methods. A small portion are prepared by direct pricing; the base-year price is constructed in the same way as for aircraft. Most are prepared by deflation using indexes constructed from DOD prices, in the same way as for aircraft, from ICS data [12A, B]. The rest are deflated using eight PPI's [62].

For the advance quarterly estimates, quantities and prices (including estimates of ECO costs) for the directly priced estimates are based largely on scheduled deliveries and prices from unpublished data underlying the budget [4B-14]. Data from CCDR's [7] are incorporated as they become available. For the estimates that are deflated, eight PPI's are used. Two months of PPI's are available for the advance estimate; the third month is available for the preliminary estimate.

Other nondurable goods.—Constant-dollar purchases of other nondurable goods are prepared by deflation. A substantial portion are deflated using indexes constructed from DOD prices available in the ICS [12A, B, D, E]; the rest are deflated using four PPI's for clothing and textiles and six PPI's for subsistence (mostly food) [62].

For the current quarterly estimates, all purchases of other nondurable goods are deflated using PPI's. Two months of PPI's are available for the advance estimate; the third month is available for the preliminary estimate.

As explained in describing current-dollar purchases, the source data include goods purchased and given to foreign countries under foreign assistance programs. The current-dollar estimates are deflated using 25 PPI's, reflecting the wide range of these goods.

Compensation of employees

Except for one type of pay, constant-dollar estimates of the compensation of employees are prepared by extrapolating base-year compensation by an index of employment or by an index of employee hours. The extrapolators are adjusted, to the extent possible, for changes in experience and education—that is, in the quality of the workforce. This procedure is designed to approximate specification pricing for output by general government employees. It assumes that, for a given type of employee, output per hour worked does not change over time and that productivity changes occur for the workforce only because of changes in the mix of employees with respect to their level of experience and education. The constant-dollar estimates for a small part of military compensation are prepared by deflation using pay rates.

Military compensation.—The constant-dollar estimates of military compensation are derived using extrapolation and deflation methods. Extrapolation is used for the types of compensation that are based on rank or length of service, such as basic pay, or are based on a percentage of pay, such as reenlistment bonuses. Deflation is used for special pays, such as flight pay and dentist pay, that are paid to military personnel who meet special requirements and training.

As mentioned, in the extrapolation method the quality of a unit of labor purchased is defined in terms of education and experience. Changes in these characteristics are treated as quality changes; all other changes are price changes. For the military pay system, rank and length of service are assumed to represent the education and experience criteria. Twenty-three ranks—10 for officers, 4 for warrant officers, and 9 for enlisted personnel—and cadets are identified [13B, C, F, G]. The 1982 compensation (excluding the special pays) per employee for a given rank and length of service is the base-year price. Employment by rank and length of service for the current period is multiplied by this base-year price to obtain this part of constant-dollar military compensation. The difference between the constant-dollar average salary in a given year and the base-year average salary represents the shift in the composition of employment with respect to educational attainment and experience.

Special pays represent a higher level of educational attainment and experience. Any change in the spe-

cial pay rate, therefore, is a price change. Information on changes in special pays is available from the military compensation report [13A, D]. A price index is constructed for each of the special pays and is used to deflate the current-period expenditures for these pays.

For the advance quarterly estimates, 2 months of employment data are available from DOD manpower reports [13E] for the extrapolation method; the third month is available for the preliminary estimate.

Civilian compensation.—The constant-dollar estimates of civilian employee compensation are derived by extrapolation and then divided between national defense and nondefense purchases in proportion to employment. The basic unit of purchase—and the extrapolator—is an hour worked; an hour paid is not used because it would reflect changes in holidays and annual leave usage as well as hours worked; the former are considered to be price changes. The quality of an hour worked is defined in terms of the education and experience of the employee. Changes in educational attainment and experience are considered quality changes; all other changes are price changes.

There are several different Federal civilian pay plans—for example, General Schedule and the Wage Grade. All are based on skill level (grade) and length of service (step), which are assumed to represent the education and experience criteria. Average 1982 compensation per hour worked (within a pay plan) for each grade is the base-year price.

Employment data by grade and step for each pay plan for civilian personnel are available from OPM [13H, J], generally by the first July revision, and are adjusted to reflect changes in the index of average hours worked. These data are multiplied by the base-year price to obtain constant-dollar civilian compensation.

For the advance quarterly estimates, the change in total civilian employment is used to estimate the change in constant-dollar compensation.

Other services

Contractual research and development.—Constant-dollar purchases of contractual research and development (R&D) are prepared by deflation. An index of input costs from a sample of companies doing R&D for DOD and Department of Energy (DOE) is constructed using weights from the BEA sample of R&D contractors data. The sample of 25 contractors, selected on a probability basis, report quarterly on the cost of three R&D inputs: Direct labor, direct material, and indirect costs. The price of direct labor is represented by the hourly wage rate, by standard job classification title (for example, supervisory electronic engineer), of employees engaged in R&D. The price of direct material is represented by a sample of PPI's [62] selected in consultation with each participating company. These two indexes are weighted together (with 1982 weights) to calculate a price index for direct costs. A price index for indirect costs is constructed as the

product of the price index of direct costs and an index of the indirect cost rate (the negotiated rate of overhead costs). In turn, the indexes of the prices of direct and indirect costs are combined (with 1982 weights) to construct the price index for a company.

For the advance quarterly estimate, 2 months of PPI's are available for the parts of the index based on those indexes; judgment is used for the rest. Contractor information and the third month of PPI's are available for the preliminary estimate.

Installation support.—Constant-dollar purchases of installation support services are prepared by deflation. Some are deflated using indexes constructed from DOD contract information [5A, F, G], some using PPI's or CPI's [62, 59], and some using average hourly earnings [60]. For services purchased overseas, adjustments are made for the exchange rate [10] between the U.S. dollar and currencies of countries where substantial purchases are made (usually Germany, Japan, South Korea, and the United Kingdom).

For communication other than postage and local telephone and for property maintenance, information from DOD contracts provides the basis for constructing price indexes [47, 48]. The costs of implementing changes in the contracts' detailed work statements that are deemed to be quality changes are used to adjust the price indexes derived from changes in contract value.

For the utility categories, postage, and local telephone service, PPI's and CPI's [62 and 59, respectively] are used.

For the remaining six categories, price indexes are constructed on the basis of average hourly earnings of production workers in related industries [60]. For example, the price index used to deflate housekeeping services is constructed from the average hourly earnings for workers providing services to buildings on the assumption that the price of these services moves like the wage of the employees performing the work.

For the advance quarterly estimate, contract information and 2 months of PPI's, CPI's, average hourly earnings, and exchange rates are available. The third month is available for the preliminary estimate.

Weapons support.—Constant-dollar purchases of weapons support services are prepared by deflation. Some are deflated using indexes constructed from DOD contract information and some using average hourly earnings [60].

For the advance quarterly estimate, contract information and 2 months of average hourly earnings are available; the third month is available for the preliminary estimate.

Personnel support.—Constant-dollar purchases of personnel support services are prepared by deflation. Training and education is deflated using a sample of tuition prices paid by DOD, and consulting is deflated using average hourly earnings [60]. For the services of foreign nationals, wage rates paid by DOD [16, 21] are

adjusted for the exchange rate [10] between the U.S. dollar and currencies of countries where substantial purchases are made.

For the advance quarterly estimate, contract information and 2 months of average hourly earnings are available; the third month is available for the preliminary estimate. For the services of foreign nationals, the current quarterly estimates are judgmental extrapolations.

Transportation of materiel.—Constant-dollar purchases of services for the transportation of materiel are prepared by deflation using indexes constructed from DOD prices available in reports from the Military Sealift Command [66, 67, 68, 69, 70, 71] and Military Traffic Management Command [30, 31, 32, 34, 35]. Samples of trips from each of four categories—air, sea, rail, and truck—and of terminal services are priced each quarter to construct price indexes for each category. This information is available for the advance quarterly estimate.

Travel of persons.—Constant-dollar purchases of services for the travel of persons are prepared by deflation. Indexes constructed from DOD prices available in reports from the Military Traffic Management Command, the Military Airlift Command, and a trade source are used to deflate air travel and travel by bus and rail [11, 28, 29, 33]. These indexes are constructed using a sample of trips from the two categories that is priced each quarter. Indexes constructed from information from the General Services Administration on reimbursement rates for per diem, dislocation allowances, and mileage for privately owned vehicles [87] and from CPI's for taxi fares and car rental fees [59] are used to deflate reimbursable travel expenses. With the exception of the CPI's, for which 2 months of data are available, this information is available for the advance quarterly estimate; the third month of the CPI's is available for the preliminary estimate.

Other services.—Constant-dollar purchases of other services are prepared by deflation with an index constructed from average hourly earnings in the miscellaneous services industry [60]. For the advance quarterly estimate, 2 months of average hourly earnings data are available; the third month is available for the preliminary estimate.

Structures

Military facilities.—Constant-dollar purchases of military facilities are prepared using two methods. The estimate of domestic new construction is prepared by direct pricing; the rest is prepared by deflation using the combined IPD derived from the directly priced estimates. For facilities that are constructed overseas, adjustments are made for the exchange rate [10] between the U.S. dollar and currencies of countries where substantial construction takes place (usually Germany, Japan, and South Korea).

The estimates that are directly priced use the number of square feet constructed (or other physical unit

measure) and the base-year cost per square foot, by detailed DOD construction category, derived from information contained in construction project reports (CPR's) [5]. The categories are set up on the basis of end use and other characteristics that serve as pricing specifications. The cost per square foot is adjusted to reflect the cost (in 1982 dollars) of any changes in the specification of the construction category. (For more detail, see "Implicit Price Deflators for Military Construction" [42].)

For the current quarter, the estimates that are directly priced are prepared in two parts: For new projects, the number of square feet constructed and prices are judgmental; for ongoing projects, the number of square feet constructed and prices are from CPR's [5]. The military facilities IPD derived from the directly priced estimates is used for the estimates that are deflated. Two months of exchange rates are available for the advance estimate; the third month is available for the preliminary estimate.

Other.—Constant-dollar purchases of two categories of other structures are prepared by deflation. The price indexes used for new construction are from *Current Construction Reports* [37]. These indexes include the Turner Construction Company building cost index, the Federal Highway Administration composite highway construction index, and the Bureau of the Census index for one-family houses sold. The indexes are smoothed by a three-quarter moving average or are seasonally adjusted using the Census X-11 procedure. (Prior to 1985, the Census Bureau index was used with seasonal adjustment.) The availability of the price data varies for each index, and BEA prepares judgmental estimates to supplement the available data.

Family housing is deflated using a three-quarter moving average of the Census Bureau index for new one-family houses sold (excluding lot) adjusted for exchange rates [10]. DOE construction of nuclear facilities is deflated using a composite index consisting of the Census Bureau index for one-family houses sold, the Turner Construction Company building cost index, and the Federal Highway Administration highway structures construction index (a component of the composite).

Net purchases of used structures are deflated using the IPD for new nonresidential structures; these estimates are prepared along with other components of gross private domestic fixed investment. For facilities that are constructed overseas, adjustments are made for the exchange rate between the U.S. dollar and currencies of countries where substantial construction takes place.

For the current quarterly estimates of other structures, the advance estimate is based on the following data: 2 months of the Census Bureau index for new one-family houses sold, a quarterly estimate of the Turner Construction Company building cost index and of the Federal Highway Administration high-

way structures construction index, and 2 months of exchange rates. For the monthly measures, 3 months of data are available for the preliminary estimate.

Nondefense purchases

As previously discussed, current-dollar nondefense purchases are derived in two pieces: CCC inventory change and all other purchases. All other purchases are then classified by type of purchase—durable goods, nondurable goods, compensation, other services, and structures. Compensation is derived from total Federal civilian compensation as described in the national defense section. Purchases of structures are from the Census Bureau *Current Construction Reports* [37]. The remaining purchases are allocated to durable goods, to nondurable goods except CCC, and to other services based on annual estimates of expenditures by object class from the *Treasury Bulletin* [78], the *MTS* [77], the *Budget Appendix* [4A-2], contract awards [6C], and other agency reports [12E, 14, 25, 39, 52, 54, 55]. Quarterly current-dollar estimates of this group are interpolations without an indicator and, for the current estimates, judgmental extrapolations.

As indicated earlier, table II-8 indicates which of the three methods of preparing constant-dollar estimates—deflation, extrapolation, or direct pricing—is used for the components and provides an overview of the source data. Table II-10 shows in detail the price indexes or extrapolators used to derive constant-dollar estimates. The expenditures by object class discussed above are used to weight the price indexes.⁹

Durable goods

Constant-dollar purchases of durable goods are derived by deflation. Data on prices paid by the Veterans' Administration (VA) for equipment and supplies are available from inventory control systems (ICS) [12E]. ICS data from the VA are used as they become available, generally by the first July revision. The BEA price index is used for computers [43, 45]. PPI's are used for all other durable goods [62]. For the advance quarterly estimate, all price indexes—except for computers—are based on 2 months of PPI's. Three months of PPI's are available for the preliminary estimate.

Nondurable goods

Constant-dollar CCC inventory change is derived using a procedure that parallels the current-dollar estimating procedure described earlier. For each agricultural commodity where the not seasonally adjusted estimates are the product of a quantity and a market price, the constant-dollar not seasonally adjusted estimate is the product of the same quantity and the 1982 average market price from Department of Agriculture (USDA) data [22, 26]. Other agricultural commodities—and the accounting adjustments—are

9. The current-dollar estimates of nondefense purchases by type for the relevant year are used in BEA's benchmark input-output tables.

Table II-10.—Price Indexes Used in the Derivation of Constant-Dollar Federal Government Nondefense Purchases of Goods and Services

Category	Price index or extrapolator for July revision ¹	1982 weight (Percent)
Nondefense purchases	IPD calculated from detail below	100.000
Durable goods	IPD calculated from detail below	3.899
Computer equipment	BEA computer price index	.792
Aircraft	PPI for civilian aircraft	.055
Aircraft components	Index of AHE for aircraft and parts industry	.015
Tractors	PPI for tractors, other than farm	.006
Motor vehicles	PPI for motor vehicles	.314
Motor vehicle parts	PPI for motor vehicle parts	.069
Internal combustion engines	PPI for internal combustion engines	.001
Diesel engines	PPI for diesel, semidiesel, and dual fuel, nonauto internal combustion engines	.034
Machine shop products	PPI for machine shop products	.008
Tires and tubes	PPI for tires, tubes, tread and repair materials	.014
Mechanical power transmission equipment	PPI for mechanical power transmission equipment	.013
Ball and roller bearings	PPI for ball and roller bearings	.007
Metalworking machinery and equipment	PPI for metalworking machinery and equipment	.054
Special industry machinery and equipment	PPI for special industry machinery and equipment	.200
Construction machinery and equipment	PPI for construction machinery and equipment	.020
Industrial material handling equipment	PPI for industrial material handling equipment	.034
Refrigeration equipment	PPI for refrigeration equipment	.030
Pumps, compressors, and equipment	PPI for pumps, compressors, and equipment	.018
Heating equipment	PPI for heating equipment	.010
Hand and edge tools	PPI for hand and edge tools	.098
Precision measuring tools	PPI for precision measuring tools	.005
Hardware	PPI for hardware	.023
Structural, architectural, and pre-engineering metal products	PPI for structural, architectural, pre-engineering metal products	.019
Communications equipment	PDE IPD for communications equipment	.800
Radio receivers	PPI for radio receivers	.005
Television receivers	PPI for television receivers	.005
Fans and blowers	PPI for fans and blowers, except portable	.002
Metal valves	PPI for metal valves, except fluid power	.013
Pipe fittings and flanges	PPI for metal pipe fittings, flanges, and unions	.004
Electrical machinery and equipment	PPI for electrical machinery and equipment	.194
Motors, generators, motor generator sets	PPI for motors, generators, and motor generator sets	.078
Electric lamps, bulbs, and parts	PPI for electric lamps, bulbs, and parts	.036
Medical, surgical, and personal aid devices	PPI for medical, surgical, and personal aid devices	.021
Medical equipment	IPD calculated from VA data	.104
Scientific and engineering instruments	PDE IPD for scientific and engineering instruments	.438
Optical instruments and lenses	Index of AHE for optical instruments and lenses industry	.032
Electronic components	PPI for electronic components and accessories	.018
Photographic equipment	PPI for photographic equipment and supplies	.140
Household furniture	PPI for household furniture	.078
Commercial furniture	PPI for commercial furniture	.271
Cooking equipment	PPI for cooking equipment	.001
Utensils	PPI for household flatware	.001
Tableware, kitchenware, and other pottery	PPI for tableware, kitchenware, and other pottery	.035
Calculating and accounting machines	PPI for calculating and accounting machines	.001
Office machines	PPI for office and store machines	.241
Nonferrous metals	PPI for nonferrous metals	.009
Iron and steel	PPI for iron and steel	.012
Miscellaneous metal products	PPI for miscellaneous metal products	.006
Miscellaneous products	PPI for miscellaneous products	.032
Sales of timber	PPI for lumber	-.517

Table II-10.—Price Indexes Used in the Derivation of Constant-Dollar Federal Government Nondefense Purchases of Goods and Services—Continued

Category	Price index or extrapolator for July revision ¹	1982 weight (Percent)
Nondurable goods	IPD calculated from detail below	18.845
Commodity Credit Corporation (CCC) inventory change	For most commodities, market prices from <i>Agricultural Prices</i> and <i>Dairy Market Statistics: Annual Summary</i> . For other crops, prices received by farmers from USDA data.	11.629
CCC donations	Composite index of prices received by farmers	.899
Strategic petroleum reserve	DOE prices	2.759
Naval petroleum reserve	DOE prices	-2.065
Petroleum products	Composite index of PPI's for middle distillates, gasoline, and residual fuels.	.642
Paper	PPI for paper	.220
Printed materials	Index of AHE for commercial printing industry	.594
Small arms ammunition	PPI for small arms and ammunition	.001
Containers and packaging	PPI for other miscellaneous metal products	.421
Plywood	PPI for plywood	.099
Other nonmetallic minerals	PPI for other nonmetallic minerals	.137
Medical supplies	IPD calculated from VA data	.053
Other agricultural chemicals	PPI for other agricultural chemicals	.251
Office supplies and accessories	PPI for office supplies and accessories	1.602
Soap and synthetic detergents	PPI for soap and synthetic detergents	.533
Miscellaneous chemical products and preparations	PPI for miscellaneous chemical products and preparations	.501
Luggage and small leather goods	PPI for luggage and small leather goods	.160
Sanitary papers and health products	PPI for sanitary papers and health products	.265
Mixed fertilizers	PPI for mixed fertilizers	.014
Processed foods and feeds	PPI for processed foods and feeds	.006
Refractories	PPI for refractories	.094
Apparel findings	PPI for buttons, button blanks, and parts	.030
Services	IPD calculated from detail below	68.842
Compensation of employees	IPD calculated from detail below	41.914
Civilian compensation	Base-year value extrapolated by employment (by grade and step) and by hours worked.	40.546
Coast Guard compensation	Base-year value extrapolated by employment (by grade and step) and by hours worked.	1.368
Other services	IPD calculated from detail below	26.928
Travel	National defense purchases IPD for travel of persons	1.080
Air transportation of things	National defense purchases IPD for air transportation	.041
Rail transportation of things	National defense purchases IPD for rail transportation	.072
Sea transportation of things	National defense purchases IPD for sea transportation	.027
Truck transportation of things	National defense purchases IPD for truck transportation	.188
Parcel post service	IPD for parcel post service	.014
Rental services	CPI for residential rent	.702
Communications services	CPI for telephone services	.814
Water, sewerage, and sanitation services	CPI for water, sewerage and sanitation services	.056
Electricity	PPI for electric power	.534
Electrical repair services	Index of AHE for electrical repair shops industry	1.228
Other repair services	Index of AHE for miscellaneous repair services industry	.162
Business services	Index of AHE for miscellaneous business services industry	1.108
Services to aircraft and aerospace equipment	Index of AHE for aircraft and parts industry	1.513
Ship services	Index of AHE for ship and boat building and repairing industry	.324
Other communications services	Index of AHE for communications services industry	.060
Real estate services	Index of AHE for real estate operators and lessors industry	1.088
Engineering and architectural services	Index of AHE for engineering and architectural services industry	11.635
Painting and decorating services	Index of AHE for painting, paper hanging, and decorating industry	.169
Other trade contractors services	Index of AHE for special trade contractors industry	2.013
Highway services	Index of AHE for highway and street construction industry	.144
Equipment inputs purchased for other services	IPD for nondefense durable goods less timber sales and computer equipment).	1.999
Equipment inputs purchased for modification and maintenance of equipment services.	Composite index of PDE IPD's for aircraft, for ships and boats, and for communications equipment, and PPI's for photographic equipment and supplies and for construction machinery and equipment.	1.417
Imputed financial services	Base-year value extrapolated by paid employee hours of relevant financial institutions.	.540

See footnotes at end of table.

Table II-10.—Price Indexes Used in the Derivation of Constant-Dollar Federal Government Nondefense Purchases of Goods and Services—Continued

Category	Price index or extrapolator for July revision ¹	1982 weight (Percent)
Structures.....	IPD calculated from detail below	8.415
New construction put-in-place.....	IPD calculated from detail below	8.485
Industrial buildings.....	Average of Turner Construction Company building cost index, Bureau of the Census price index of new one-family houses sold (excluding lot), and Federal Highway Administration highway structures construction index.	1.142
Education buildings	Average of Turner Construction Company building cost index and Bureau of the Census price index of new one-family houses sold (excluding lot).	.028
Hospitals and health facilities	Turner Construction Company building cost index .....	.519
Other buildings	Average of Turner Construction Company building cost index and Bureau of the Census price index of new one-family houses sold (excluding lot).	.661
Highways and streets	Federal Highway Administration composite highway construction index ..	.657
Conservation and development of resources.....	Bureau of Reclamation composite construction cost index.....	5.222
Coast Guard construction	Composite of Turner Construction Company building cost index, Bureau of the Census price index of new one-family houses sold (excluding lot), and Federal Highway Administration composite highway construction index.	.028
Miscellaneous nonbuilding construction	Average of the Bureau of Reclamation composite construction cost index and Highway Administration composite highway construction index.	.228
Net purchases of existing nonresidential structures.....	IPD for purchases of new private nonresidential structures.....	-.024
Net purchases of existing residential nonfarm structures.....	IPD for purchases of new private residential nonfarm structures .....	.066
Government force-account construction compensation.....	Bureau of Reclamation composite construction cost trends index	-.112

1. The estimates for later revisions use the same indexes or extrapolators.

Note.—Weights may not sum to category totals because of rounding.

AHE Average hourly earnings.
CPI Consumer price index.
DOE U.S. Department of Energy.
IPD Implicit price deflator.
PDE Producers' durable equipment.
PPI Producer price index.
USDA U.S. Department of Agriculture.
VA Veterans' Administration.

deflated by a price index for average prices received by farmers [26]. Seasonally adjusted estimates are derived in the same manner as for the current-dollar series.

For the advance quarterly estimates of CCC purchases, 1 month of USDA price data is available for the directly priced estimates and 2 months of prices received by farmers are available for the deflated estimates. Additional price data become available for the preliminary and final estimates.

Constant-dollar purchases of other nondurables are derived using a directly priced method and deflation. The directly priced method is used with prices and quantities from DOE for purchases of petroleum for the strategic petroleum reserve [55] and for sales from the naval petroleum reserve [54]. PPI's are used for most other nondurable goods [62]. For the advance quarterly estimates, 2 months of DOE prices and PPI's are available; 3 months of data are available for the preliminary and final estimates.

Compensation

Constant-dollar purchases of Federal civilian compensation are derived by extrapolation using hours worked and base-period compensation. The final result is split between defense and nondefense in proportion to employment. This procedure is described in the constant-dollar compensation section of national defense purchases. Constant-dollar compensation of Coast Guard personnel is derived in the same manner as military personnel and added to the estimate for civilian nondefense personnel to yield total nondefense purchases of compensation in constant dollars.

Other services

Constant-dollar purchases of other services, except imputed financial services, are derived by deflation. Constant-dollar estimates of the services rendered without payment to the Federal Government by de-

pository institutions are prepared by extrapolating the base-year value using BEA estimates of the paid employee hours in commercial banks and Federal Reserve banks, based on BLS tabulations of employment and wages [1, 60, 61].

The IPD's for some defense purchases are used for nondefense purchases. For example, per diem rates and air fares are the same for all civilian employees; therefore, the IPD for defense travel of persons is directly applicable to nondefense purchases of travel of persons. Defense IPD's for transportation by mode are also used. CPI's and PPI's are used for some purchases, such as telephone service and electric power [59, 62]. For many purchased services, such as maintenance services and engineering services, price indexes are not available. An index is estimated using a combination of average hourly earnings [60] and equipment IPD's to represent the labor and capital inputs to the services being purchased.

For the current quarterly estimates, the estimates of imputed financial services are judgmental extrapolations. For the other services, 2 months of price data are available for the advance estimates; the third month of data is available for the preliminary estimates.

Structures

Constant-dollar purchases of structures are derived by deflation. The indexes used are the same as those described for other national defense structures (see page 60). Net purchases of existing structures are deflated using BEA's IPD's for new private nonfarm residential structures and for new private nonresidential structures. These estimates are prepared along with other components of gross private domestic fixed investment. New construction force-account compensation is deflated using the IPD for conservation and development construction.

Sources

This is a list of information sources used in preparing current- and constant-dollar estimates of Federal Government transactions in the national income and product accounts. Many of the sources shown are unpublished internal recordkeeping documents and files. In some cases, the information used is more detailed than that available in the listed source, which is the publication most accessible to the public.

1. Board of Governors of the Federal Reserve System. *Annual Report*. Washington, DC: Board of Governors, annually.
2. Board of Governors of the Federal Reserve System. *Retirement Plan for Employees of the Federal Reserve System*. New York, NY: Board of Governors, annually.
3. Board of Governors of the Federal Reserve System. Sector Tables. *Flow of Funds Accounts*. (Statistical Release Z.1.) Washington, DC: Board of Governors, quarterly.
4. Budget documents
 - A. Basic
 1. U.S. Executive Office of the President. Office of Management and Budget. *Budget of the United States Government*. Washington, DC: U.S. Government Printing Office, annually.
 2. U.S. Executive Office of the President. Office of Management and Budget. *Budget of the United States Government: Appendix*. Washington, DC: U.S. Government Printing Office, annually.
 3. U.S. Executive Office of the President. Office of Management and Budget. *Budget of the United States Government: Special Analyses*. Washington, DC: U.S. Government Printing Office, annually.
 - B. Supporting
 1. U.S. Executive Office of the President. Office of Management and Budget. "Pay Raise Impacts." Washington, DC, annually, unpublished.
 2. U.S. Department of the Air Force. "Committee Staff Procurement Backup Book, Aircraft Procurement, Air Force." Washington, DC, annually, unpublished.
 3. U.S. Department of the Air Force. "Committee Staff Procurement Backup Book, Missile Procurement, Air Force." Washington, DC, annually, unpublished.
 4. U.S. Department of the Air Force. "Committee Staff Procurement Backup Book, Other Procurement, Air Force." Washington, DC, annually, unpublished.
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Appendix II-A

Definitions of the Major Types of National Defense Purchases of Goods and Services

Following are brief definitions of the BEA categories of defense purchases. These categories fall uniquely into one of the four major product types of final demand: Durable goods, nondurable goods, services, and structures. These categories differ from the similarly named appropriation categories because the latter may include more than one of the major product types. For example, the Department of Defense (DOD) appropriation for aircraft contains some purchases of engineering services that BEA classifies in services rather than in durable goods.

Durable goods

Aircraft: New aircraft, both fixed-wing and rotary wing, as well as spare and repair parts, modification kits, and support equipment.

Missiles: New missiles, launching devices, guidance radars, and shelters, as well as space devices such as satellites, boosters, and the space shuttle. Also included are spare and repair parts, modification kits, and support equipment.

Ships: New ship construction and conversion. This category also includes foreign military sales of ships during their period of construction.

Vehicles: New combat and noncombat vehicles as well as spare and repair parts, and modification kits.

Electronic equipment: Nonairborne communication and electronic equipment. Items include encryption equipment, handheld radios, radar systems, satellite ground stations, tactical communications equipment, sonars, reconnaissance equipment, and base communication and electronic equipment.

Other military equipment: Other items of equipment that are uniquely military in nature. Among the items included are airfield lights, photographic equipment, electronic test equipment, biological and chemical defense equipment, night vision goggles, sonobuoys, and small arms.

Other durable goods: Durable goods that are not uniquely military in nature. This category includes purchases of general purpose computers and related equipment. Also included in this category are purchases of durable goods for the military assistance program, sales of durable goods by DOD, and purchases of durable goods for defense by agencies except DOD.

Nondurable goods

Petroleum products: Refined petroleum products such as jet fuels and heating oil.

Ammunition: Bombs, cartridges, torpedoes, mines, demolition materials, and other nonnuclear explosive products. Also included are the various

load, assemble, and pack services performed on purchased components.

Other nondurable goods: Food, clothing, printing, medical supplies, cleaning supplies, and other nondurable goods. Also included are sales of nondurable goods by DOD and purchases of nondurable goods for the military assistance program.

Compensation of employees

Military compensation: Wages and salaries and supplements to wages and salaries paid to military employees of DOD. This category also includes pay of the military reserve but does not include the Coast Guard and the National Oceanic and Atmospheric Administration except in wartime.

Civilian compensation: Wages and salaries and supplements to wages and salaries paid to civilian employees of DOD. This category also includes employees in defense activities of non-DOD agencies; it excludes employees of DOD civil functions such as the Corps of Engineers. The direct and indirect hire of foreign nationals are excluded from this category and are included in the personnel support category.

Other services

Contractual research and development (R&D):

Research, development, and test and evaluation performed by the private sector under contract to DOD. Also included are atomic energy R&D for defense funded by the Department of Energy (DOE) and Federal research centers operated by the private sector, such as the Jet Propulsion Laboratory. R&D performed by DOD employees is excluded.

Installation support: Services related to the operation and maintenance of military installations. Among these services are communications, postage, utilities, equipment maintenance and rental, property maintenance, housekeeping services, and contractor-operated installations.

Weapons support: Depot maintenance, weapons modification services, engineering support, system management, and production base support. Spare parts and modification kits are included in purchases of goods; only purchases of services are included in this category.

Personnel support: Consulting services, training, education, and direct and indirect hire of foreign nationals.

Transportation of materiel: Care and movement of goods by water, rail, truck, and air. Also included are the rental of trucks and other transportation equipment and warehousing fees.

Travel of persons: Care and movement of DOD military and civilian employees. Included are tickets for all modes of travel, per diem, taxi fares, au-

tomobile rental, and mileage allowances for privately owned vehicles.

Other: Services for the military assistance program, sales of services by DOD, and purchases of defense services by non-DOD agencies.

Structures

Military facilities: New construction of facilities built to assist, enhance, or house the activities of the military services.

Other structures: Family housing construction, net purchases of existing structures, and atomic energy defense construction funded by the Department of Energy.

Appendix II-B

Federal Government Enterprises

Commodity Credit Corporation

U.S. Postal Service

Insurance enterprises:

- Credit Union Share Insurance Fund
- Federal Deposit Insurance Corporation
- Federal Home Loan Bank Board Revolving Fund
- Federal Housing Administration Fund
- Federal Savings and Loan Insurance Corporation
- Overseas Private Investment Corporation
- Pension Benefit Guaranty Corporation

Electric power enterprises:

- Bonneville Power Administration
- Lower Colorado River Basin Development Fund
- Southeastern Power Administration
- Southwestern Power Administration
- Tennessee Valley Authority
- Upper Colorado River Basin Fund
- Western Area Power Administration Marketing Fund

All other enterprises:

- Veterans Canteen Service
- Government Printing Office Sales Fund
- Military Post Exchanges and Restaurants
- Panama Canal Commission

NOTE.—The titles used in this list of enterprises are those used in the *Budget of the United States Government: Appendix*.

Part III.

State and Local Government Transactions

Overview of Estimating Procedures

Annual estimates

The annual NIPA estimates of State and local government receipts and expenditures are based primarily on compilations of data on the finances of State and local governments. These compilations are prepared by the Bureau of the Census from the quinquennial census of governments, annual surveys of government finances and employment, annual surveys of the finances of public employee retirement systems, and quarterly surveys of tax revenues. Other sources include the construction statistics prepared by the Bureau of the Census, data on transfer payments from various agencies of the U.S. Department of Health and Human Services (HHS), and the employment and wage and salary statistics prepared by the Bureau of Labor Statistics (BLS).

The derivation of the annual estimates of State and local government receipts and expenditures on a NIPA basis starts with the financial data in the *Census of Governments* [24], for years ending in 2 or 7, and in *Governmental Finances* [29] for other years. Hereafter, these publications are cited as *COG/GF* when the context is a general description of methodology and as *COG* or *GF* when information specific to only one of the publications is referenced.

Data from *GF* are available with a 2-year lag and are incorporated in the third annual—or July—revision of the NIPA estimates. Data from *COG* are available with a 3-year lag and replace the *GF* data for census years in the NIPA comprehensive revisions. Estimates for the second annual revision incorporate both preliminary tabulations of unpublished *GF* data and BEA extrapolations of the *GF* components used; estimates for the first annual revision incorporate BEA extrapolations of the *GF* components used. In all instances, the procedure for using the *COG/GF* data is the same.

Tables III-1 and III-2 illustrate the steps involved in deriving the NIPA estimates of receipts and expenditures, respectively, from these reports. The tables are an amplification of NIPA table 3.18, which relates

the NIPA estimates of total receipts and expenditures to the *COG/GF* data. Like NIPA table 3.18, tables III-1 and III-2 are for a fiscal year, the basis on which the *COG/GF* data are tabulated. For the purposes of these tables, the other source data, which are quarterly and monthly, are placed on a fiscal year basis. In the actual derivation of the NIPA estimates, which is described in the next section, the *COG/GF* data are placed on a calendar year basis.¹

In tables III-1 and III-2, the first eight columns illustrate the major steps in the derivation of total receipts and expenditures on a NIPA basis. The first column shows the major categories of the *COG/GF* data as published.² The next two columns record the replacement of certain of the *COG/GF* data with alternative source data that are more appropriate for the NIPA's; the fourth column shows the result of this replacement. The next four columns record adjustments made to the source data used for the NIPA's; these adjustments are for coverage, netting and grossing, fiscal year, and timing and other reasons. The ninth column shows the estimates of total NIPA receipts and expenditures that result from this process. The remaining columns show the distribution of these totals among the NIPA components of receipts and expenditures. The year used for illustration in these tables is 1982, the most recent year for which the census of governments is available; therefore, *COG* data are shown in the first column. For a noncensus year, *GF* data would be shown in the first column; the derivation would be the same.

1. The data included in the *COG/GF* report for a given year are for fiscal years ending at various dates during the 12 months ending June 30 of the year specified.

Because most State governments and State and local government enterprises have fiscal years ending on June 30, for these entities the conversion of the *COG/GF* data to a calendar year basis is accomplished by a 2-year average.

Because local governments have fiscal years ending at various dates during the year, for these entities the conversion of the *COG/GF* data to a calendar year basis involves weights based on periodic Census Bureau tabulations by ending month of the fiscal year. Denoting the fiscal year running from July 1 of calendar year $t-1$ to June 30 of calendar year t as $FY(t)$ and the calendar year t as $CY(t)$, then

$$CY(t) = .33FY(t) + .65FY(t+1) + .02FY(t+2).$$

For 1962 and earlier years, the *COG/GF* data on local governments cover fiscal years ending during the calendar year and are assumed to be on a calendar year basis, except for school districts, which are lagged six months.

2. Lines 10 through 16 of column 1 of table III-1 are BEA groupings of *COG/GF* detail. The derivation of the entries in these lines is shown in Appendix III-A.

Table III-1.—Derivation of State and Local Government Receipts in the National Income and Product Accounts (NIPA's) from Census of Governments and Other Sources, FY 1982

[Billions of dollars]

Line	Census of Governments (COG) categories	Revenues (1)	Replacement with other sources		Equals: Used for NIPA's (4)	Adjustments				Equals: NIPA receipts (9)
			Less: COG exclusions (2)	Plus: Replacements (3)		Coverage (5)	Netting and grossing (6)	Fiscal year (7)	Timing and other (8)	
1	Total.....	547.7	335.4	338.7	551.0	-18.6	-94.7	0.7	-0.9	437.5
2	Taxes.....	266.4	248.1	248.5	266.8	0	0	.3	-.4	266.7
3	Individual income.....	50.7	50.7	51.0	51.0	0	0	0		51.0
4	Corporation net income.....	15.0	15.0	14.0	14.0	0	0	0	-.4	13.6
5	Sales and gross receipts:									
6	State.....	78.8	78.8	78.8	78.8	0	0	0	0	78.8
7	Local.....	14.8	0	0	14.8	0	0	.2		15.0
8	Property.....	82.1	82.1	83.5	83.5	0	0	0		83.5
9	Other.....	24.9	21.5	21.3	24.7	0	0	.1		24.8
10	Charges and miscellaneous general revenue.....	104.0	0	0	104.0	-1.7	-54.2	0	-.5	47.6
11	Government sales.....	13.0	0	0	13.0	0	-13.0	0		0
12	Sale of property.....	.7	0	0	.7	-.4	-.3	0		0
13	Enterprise revenue.....	15.0	0	0	15.0	0	-15.0	0		0
14	Interest earnings.....	25.8	0	0	25.8	0	-25.8	0		0
15	Dividends received.....	.1	0	0	.1	0	-.1	0		0
16	Other.....	49.4	0	0	49.4	-1.3	0	0	-.5	47.6
17	Utility and liquor store revenue.....	34.0	0	0	34.0	0	-34.0	0		
18	Insurance trust revenue.....	56.0	0	0	56.0	-16.9	-5.5	0		34.1
19	Employer contributions for government employee retirement funds.....	n.a.	0	0	0	0	14.8	0		14.8
20	Interest received.....	18.8	0	0	18.8	-1.1	-17.7	0		0
21	Dividends received.....	2.5	0	0	2.5	0	-2.5	0		0
22	Other.....	34.7	0	0	34.7	-15.8	0	.5		19.4
23	Intergovernmental revenue.....	87.3	87.3	90.2	90.2	0	-5.8	0		84.4
24	Medical vendor payments to public hospitals.....	n.a.	0	0	0	0	4.7	0		4.7

Line	Census of Governments (COG) categories	NIPA receipts (9)	NIPA components in which classified					
			Personal tax and nontax receipts			Corporate profits tax accruals (13)	Indirect business tax and nontax accruals (14)	Contribu- tions for social insurance (15)
			Total (10)	Income taxes (11)	Other taxes and nontaxes (12)			
1	Total.....	437.5	100.1	50.0	50.1	14.5	204.4	34.1
2	Taxes.....	266.7	59.5	50.0	9.5	14.5	192.7	0
3	Individual income.....	51.0	50.0	50.0		1.0		
4	Corporation net income.....	13.6	0			13.6		
5	Sales and gross receipts:							
6	State.....	78.8	0				78.8	
7	Local.....	15.0	0				15.0	
8	Property.....	83.5	1.3		1.3		82.2	
9	Other.....	24.8	8.1		8.1		16.7	
10	Charges and miscellaneous general revenue.....	47.6	35.9		35.9		11.7	0
11	Government sales.....	0	0					0
12	Sale of property.....	0	0					
13	Enterprise revenue.....	0	0					
14	Interest earnings.....	0	0					
15	Dividends received.....	0	0					
16	Other.....	47.6	35.9		35.9		11.7	
17	Utility and liquor store revenue.....							
18	Insurance trust revenue.....	34.1	0					34.1
19	Employer contributions for government employee retirement funds.....	14.8	0				0	14.8
20	Interest received.....	0	0				0	
21	Dividends received.....	0	0				0	
22	Other.....	19.4	0				0	19.4
23	Intergovernmental revenue.....	84.4	0					
24	Medical vendor payments to public hospitals.....	4.7	4.7		4.7			

1. Receipts of the unemployment insurance system, which are treated in Census data as receipts to States, but as Federal receipts in the NIPA's.

2. Inclusion of payments to public hospitals on behalf of indigents through medicaid and similar

programs. Such payments are excluded from Census receipts and expenditures, but are included in NIPA receipts and expenditures.

Note.—Governmental Finances (GF) data are used in noncensus years.

Table III-2.—Derivation of State and Local Government Expenditures in the National Income and Product Accounts (NIPA's) from *Census of Governments and Other Sources, FY 1982*

[Billions of dollars]

Line	Census of Governments (COG) categories	Expenditures (1)	Replacement with other sources		Equals: Used for NIPA's (4)	Adjustments				Equals: NIPA expenditures (9)
			Less: COG exclusions (2)	Plus: Replacements (3)		Coverage (5)	Netting and grossing (6)	Fiscal year (7)	Timing and other (8)	
1	Total	524.8	248.2	238.7	515.3	-20.3	-94.7	1.2	0.4	401.9
2	Current operation	375.1	178.0	177.5	374.6	3.0	14.8	.6	.8	393.8
3	Salaries and wages	190.3	178.0	177.5	189.8	0	0	0	.8	190.6
4	Other current operation	184.8	0	0	184.8	² 3.0	14.8	.6	0	203.2
5	Capital outlay	66.8	53.7	44.0	57.1	-2.7	0	-1	-1	54.3
6	Construction	53.7	53.7	44.0	44.0	0	0	0	-1	43.9
7	Equipment, land, and existing structures	13.1	0	0	13.1	-2.7	0	-1	0	10.4
8	Assistance and subsidies	17.3	14.7	15.1	17.8	0	0	0		17.8
9	Interest on debt	24.3	0	0	24.3	0	0	.6		24.9
10	Insurance trust benefits and repayments	39.5	0	0	39.5	-18.1	0	.3		21.7
11	Intergovernmental expenditures	1.8	1.8	2.1	2.1	0	0	0		2.1
12	Plus: Medical vendor payments to public hospitals	n.a.	0	0	0	0	³ 4.7	0		4.7
	Less: COG revenue reclassified as NIPA expenditures:									
13	Government sales	n.a.	0	0	0	0	13.0	0	.1	13.1
14	Sale of property	n.a.	0	0	0	0	.3	0		.3
15	Enterprise revenue	n.a.	0	0	0	0	15.0	0		15.0
16	Utility and liquor store revenue	n.a.	0	0	0	⁴ -5	34.0	0	.1	33.6
	Interest received:									
17	Insurance trust	n.a.	0	0	0	0	17.7	.9		18.6
18	Other	n.a.	0	0	0	² 3.0	25.8	-6		28.2
	Dividends received:									
19	Insurance trust	n.a.	0	0	0	0	2.5	0		2.5
20	Other	n.a.	0	0	0	0	.1	0		.1
21	Intergovernmental revenue (housing and transit subsidies)	n.a.	0	0	0	0	5.8	0		5.8

Line	Census of Governments (COG) categories	Equals: NIPA expenditures (9)	NIPA components in which classified						
			Purchases of goods and services				Transfer payments (14)	Net interest paid (15)	Less: Dividends received (16)
			Total (10)	Compensation (11)	Structures (12)	Other (13)			
1	Total	401.9	356.3	218.2	45.1	93.0	76.4	-21.9	-2.7
2	Current operation	393.8	315.4	218.2	0	97.2	30.2	0	0
3	Salaries and wages	190.6	177.5	177.5					
4	Other current operation	203.2	137.9	40.7		97.2	30.2		
5	Capital outlay	54.3	54.3	0	45.4	8.9	0	0	0
6	Construction	43.9	43.9		43.9				
7	Equipment, land, and existing structures	10.4	10.4		1.5	8.9			
8	Assistance and subsidies	17.8					17.8		
9	Interest on debt	24.9						24.9	
10	Insurance trust benefits and repayments	21.7					21.7		
11	Intergovernmental expenditures	2.1					2.1		
12	Plus: Medical vendor payments to public hospitals	4.7					4.7		
	Less: COG revenue reclassified as NIPA expenditures:								
13	Government sales	13.1	13.1			13.1			
14	Sale of property .....	.3	.3		.3				
15	Enterprise revenue	15.0							15.0
16	Utility and liquor store revenue	33.6							33.6
	Interest received:								
17	Insurance trust	18.6						18.6	
18	Other	28.2						28.2	
	Dividends received:								
19	Insurance trust	2.5							2.5
20	Other .....	.1							.1
21	Intergovernmental revenue (housing and transit subsidies)	5.8							5.8

1. The wages and salaries exhibit is \$191.6 billion. However, COG excludes from current operations force-account wages and salaries for new construction. BEA estimates the force-account component of the exhibit is \$1.3 billion, leaving \$190.3 billion within current operations.

2. An imputation by BEA of interest earnings and an equal payment for services rendered by financial institutions.

3. Benefit payments by the Unemployment Insurance System, which are treated in Census data as State payments, but as Federal payments in the NIPA's.

4. A BEA estimate of nonoperating receipts included in Census electric utility income.

5. Inclusion of payments to public hospitals on behalf of indigents through Medicaid and similar programs. Such payments are excluded from Census expenditures and receipts, but are included in NIPA expenditures and receipts.

Note.—Governmental Finances (GF) data are used in noncensus years.

Derivation of receipts

Replacement of COG data with alternative source data.—For several components of COG revenue in table III-1, alternative source data are more appropriate for the NIPA estimates either because they are consistent with estimates of similar transactions elsewhere in the NIPA's, because they provide more detail on types of receipts, or because they provide monthly or quarterly observations that permit a more precise assignment of receipts to a given time period. The COG revenue data that are replaced and their replacements are shown in the second and third columns of table III-1. The fourth column of the table shows the resulting data—the starting point for the NIPA estimates.

Most COG taxes are replaced by tax data from the *Quarterly Summary of Federal, State, and Local Tax Revenue (Quarterly Summary)* [31] because the latter are for a specific quarter and can be summed to a standard fiscal or calendar year (lines 3, 4, 5, 7, and 8). A replacement is not made for local taxes other than property taxes and income taxes because these taxes are not well covered in the *Quarterly Summary*. COG intergovernmental revenues, which are largely Federal Government payments to State and local governments, are replaced by an estimate of Federal grants-in-aid derived from Federal budget documents [57] (line 22).

Adjustments.—Adjustments to the source data used for the NIPA's for coverage, for netting and grossing, for fiscal year, and for other reasons (primarily timing), are shown in the next four columns of table III-1. Coverage adjustments arise because COG includes, but the NIPA's exclude, transactions in financial assets, transactions in land (including oil bonuses), and the transactions of the unemployment insurance system (a State program in COG but a Federal program in the NIPA's). Netting and grossing adjustments are made for two types of transactions: Those COG revenue items that are recorded as offsets to expenditures in the NIPA's (netting) and those intragovernmental items that COG excludes from both revenues and expenditures (grossing). For this table, adjustments are needed to place the COG data for local governments on a common fiscal year ending June 30. In addition, there are several other adjustments to the source data used for the NIPA's; for the most part, they reflect timing.

Coverage adjustments, shown in the fifth column of table III-1, are made to the following categories of COG revenues: (1) Revenue from the sale of land (including oil bonuses) and revenue from financial transactions are subtracted from COG charges and miscellaneous general revenue (lines 11 and 15), and (2) the interest receipts of the unemployment insurance system and unemployment taxes collected by the States are subtracted from insurance trust revenues (lines 19 and 21).

Netting adjustments, shown in the sixth column of table III-1, are made to the following categories of COG revenues for items that are recorded as offsets to expenditures in the NIPA's: (1) Government sales, sale of property, enterprise revenue, interest earnings, and dividends received are subtracted from COG charges and miscellaneous general revenue (lines 10–14); (2) COG utility and liquor store revenue, which also are enterprise revenue, are subtracted (line 16); (3) interest and dividends received are subtracted from COG insurance trust revenue (lines 19 and 20); and (4) subsidies—Federal housing and transit subsidies paid to State and local government enterprises—are subtracted from intergovernmental revenue (line 22). These items are also subtracted from expenditures in table III-2.

Grossing adjustments, shown in the sixth column of table III-1, are made in the NIPA's for items that COG excludes from revenues (and expenditures) as intragovernmental: (1) Certain employer contributions to State and local employee retirement systems (line 18) are added to COG insurance trust revenue, and (2) intragovernmental payments to public hospitals for medical assistance on behalf of indigents—medicaid—(line 23) are added to receipts. These items are also added to expenditures in table III-2.

Fiscal year adjustments are shown in the seventh column of table III-1 for local sales and gross receipts taxes (line 6), local other taxes (line 8), and other insurance trust revenue (line 21).

Timing and other adjustments to the source data used for the NIPA's are shown in the eighth column of table III-1. In the *Quarterly Summary*, which replaces COG data, taxes paid by corporations are recorded on a cash basis. In the NIPA's, corporate profits taxes are recorded on an accrual basis, and the difference between the two bases is entered as a timing adjustment in column 8 (line 4). Similar adjustments are made for State general sales and motor fuel taxes, which are also from the *Quarterly Summary*, to put them on the appropriate NIPA timing basis (line 5). In addition, because the quarterly interpolation is carried out between calendar year totals in the actual preparation of the NIPA estimates, the estimates for the four quarters of the fiscal year may not sum to the entry in column 4. Thus, an adjustment for these differences is required for table III-1; it is entered in column 8. The only entry is that for other charges and miscellaneous general revenue (line 15).

Distribution of the adjusted data into NIPA receipts components.—The NIPA estimates of total State and local government receipts that result from this process are shown in the ninth column of table III-1. The distribution of total NIPA receipts into the appropriate NIPA components is shown in the remaining columns.

Most individual income taxes are distributed to personal tax and nontax receipts. A small part is recorded as corporate profits taxes because the *Quarterly Sum-*

mary includes local corporate profits taxes in local individual income taxes. Property taxes, other taxes, and other charges and miscellaneous general revenue are distributed between personal tax and nontax receipts and indirect business tax and nontax accruals. Insurance trust revenue and intergovernmental revenue become contributions for social insurance and Federal grants-in-aid, respectively.

Derivation of expenditures

Replacement of COG data with alternative source data.—As was the case for receipts, several components of COG expenditures are replaced by alternative source data. The COG expenditures data that are replaced and their replacements are shown in the second and third columns of table III-2. The fourth column of the table shows the data that are the starting point for the NIPA estimates.

The salaries and wages component of COG expenditures for current operation (line 3) is replaced with data from BLS tabulations of employment and wages reported by employers covered by State unemployment insurance programs [50, 51] because the BLS tabulations are consistent with the wage and salary estimates used elsewhere in the NIPA's. In COG capital outlay, expenditures for new construction (line 6) are replaced with monthly data on new construction from Census Bureau *Current Construction Reports* [26] and annual Department of Transportation data on highway construction [54]. These data are available by type of construction and are on a put-in-place basis, the timing basis used in the NIPA's, unlike the COG construction expenditures, which are reported on an expenditures basis. In COG assistance and subsidies expenditures (line 8), the estimates for various assistance programs are replaced with data from the HHS [40, 41, 42, 44, 45]; these data are available monthly rather than annually, and (for Federally assisted programs) are a complete count rather than a sample survey. For the same reasons, COG State intergovernmental payments to the Federal Government (line 11), which are largely payments of supplemental security income, are replaced by HHS data [46].

Adjustments.—Adjustments to the source data used for the NIPA's for coverage, for netting and grossing, for fiscal year, and for other reasons, primarily timing, are shown in the next four columns of table III-2. For most of them, the nature of the adjustment and the reason for it has already been discussed. In addition to the types of coverage adjustments mentioned for receipts (land, financial assets, and the unemployment insurance system), the NIPA's include imputations for certain transactions not present in COG. The specific imputations are the imputed interest paid by depository institutions to State and local governments (as interest received) and purchases by State and local governments of services furnished without payment by depository institutions—that is, financial intermedi-

aries except life insurance carriers and private non-insured pension funds. The imputations arise because depository institutions provide services for which the intermediaries implicitly compensate themselves, by paying depositors less interest on their deposits than the interest that the intermediaries earn from lending or investing the funds. Because an interest receipt of equal value is imputed and added to the monetary interest receipts of State and local governments, which are subtracted from interest payments in the NIPA's, the net effect of the imputation on government expenditures is zero.

Coverage adjustments, shown in the fifth column of table III-2, are made to the following categories of expenditures: (1) Imputed bank service charges are added to COG current operation expenditures (line 4). (2) Purchases of land are subtracted from COG capital outlay (line 7). (3) Unemployment insurance benefits are subtracted from COG insurance trust expenditures (line 10). (4) In years after 1979, certain electric utility receipts that do not represent payments for current services are subtracted from COG utility and liquor store enterprise revenue (line 17). (5) Imputed interest received is added to COG interest received (line 19).

Netting adjustments to expenditures, shown in the sixth column of table III-2, are made to subtract the following groups of revenue items in COG that are recorded as offsets to expenditures in the NIPA's: (1) Government sales (line 14); (2) sale of property (line 15); (3) utility, liquor store, and other enterprise revenue (lines 16 and 17); (4) interest and dividends received (lines 18–21); and (5) housing and transit subsidies received by enterprises (line 22). All were subtracted from receipts in table III-1.

Grossing adjustments, shown in the sixth column of table III-2, are made in the NIPA's for items that COG excludes from expenditures (and revenues) as intragovernmental: (1) Certain employer contributions to State and local employee retirement systems are added to COG expenditures for current operation (line 4), and (2) payments to public hospitals for medical assistance on behalf of indigents (medicaid) are added to expenditures (line 12). All were added to receipts in table III-1.

Fiscal year adjustments are shown in the seventh column of table III-2 for expenditures for current operation (line 4), capital outlay for equipment (line 7), interest on debt (line 9), insurance trust benefits (line 10), and interest received (lines 18 and 19).

Timing and other adjustments are shown in the eighth column of table III-2. In addition, because the quarterly interpolation is carried out between calendar year totals in the actual preparation of the NIPA estimates, the estimates for the four quarters of the fiscal year may not sum to the entry in column 4. Thus, an adjustment for these differences is required for table III-1; it is entered in column 8. Entries are made for the salaries and wages component of current operation (line 3), for construction (line 6), for govern-

ment sales (line 14), and for utility and liquor store enterprise revenue (line 17). (For years immediately preceding or following a census of governments, this column could also include entries to adjust the *GF* data to levels established in that census; a new *GF* sample based on the most recent census is not drawn until the second year after the census is taken.)

Distribution of the adjusted data into NIPA expenditures components.—The NIPA estimates of total State and local government expenditures that result from this process are shown in the ninth column of table III-2. The distribution of NIPA expenditures into the appropriate NIPA components is shown in the remaining columns.

Those parts of expenditures for current operation that reflect transfer payments, subsidies, or enterprise outlays—including compensation of enterprise employees—are recorded in the appropriate NIPA categories; the remainder of expenditures for current operation, the largest part, is distributed to NIPA government purchases of goods and services. Capital outlays are distributed to NIPA purchases of goods and services; interest on debt, to NIPA net interest; and assistance and subsidies, insurance trust benefits, and intergovernmental payments to the Federal Government, to NIPA transfer payments. Of the adjustment items shown in lines 12–22, medical vendor payments to public hospitals is allocated to transfer payments; housing and transit subsidies and utility, liquor store, and other enterprise revenue to NIPA subsidies less current surplus of government enterprises; interest and dividends received, to NIPA net interest paid and dividends received, respectively; and other government sales, to NIPA purchases of goods and services.

Quarterly estimates

For the annual revisions, quarterly source data are available and are used for the following: Construction, the major components of compensation, certain transfer payments, grants-in-aid from the Federal Government, and most taxes. For the other components, there are no quarterly source data; the quarterly estimates are prepared by interpolation of the annual estimates.

For most components of the current estimates, judgmental extrapolations are used. The major exceptions are the wages and salaries component of compensation of State and local government employees, new construction put in place, and certain transfer payments; for these components, 1 month of source data are available for the advance quarterly estimates, 2 months for the preliminary estimates, and 3 months for the final estimates. In addition, for many taxes, current data on the tax base and information on changes in tax law are available.

Constant-dollar estimates of purchases

For the most part, constant-dollar estimates of State and local government purchases of goods and services are prepared by deflation, using price indexes taken, for the most part, from *Current Construction Reports* [26], *BLS Producer Prices and Price Indexes* (PPI) [52], and *BLS CPI Detailed Report* [49]. The exceptions, both of which are estimated by extrapolating base-year values using quantity indicators, are compensation and services furnished without payment by depository institutions (that is, financial intermediaries except life insurance carriers and private noninsured pension plans).

Constant-dollar estimates of purchases of structures and of other goods and services are prepared by deflating the current-dollar estimates, by commodity (that is, by type of good or service), by appropriate price indexes. For structures, the current-dollar commodity detail is provided in the source data. For other goods and services, the commodity detail is estimated by BEA from input-output (I-O) benchmark information on the commodity composition of expenditures, by function, and annual Census Bureau data on State and local government expenditures, by function.

Constant-dollar estimates of compensation are the product of average base-year compensation, current-year employment, and the percentage change in average weekly hours from the base year. Constant-dollar estimates of services furnished without payment by depository institutions are obtained by extrapolating the base-year value using employee hours in banking as the indicator.

Derivation of Receipts and Expenditures

Receipts

The primary source data for the estimates of receipts are *COG/GF—Governmental Finances* [29], *State Government Finances* [32] and, in years ending in 2 or 7, the census of governments volumes [24], all from the Census Bureau. In addition, *Finances of Employee-Retirement Systems of State and Local Governments (Retirement Systems)* [27], a specialized publication in the *COG/GF* series, provides the basic data on social insurance funds for all years after 1959, and the *Quarterly Summary* [31] provides data on many types of taxes for all years after 1962.

Before 1952, for State governments, *State Government Finances* and its predecessors provide the basic data for receipts for all years, except 1933–36, when these reports were suspended; estimates for these years are based on *Tax Yields* [22], from the Tax Policy League, a publication that was based on data compiled mainly from questionnaires sent to State tax officials.

For local governments, estimates of receipts for 1942 to 1952 are prepared from annual Census Bureau estimates of city and county revenues. Estimates for years before 1942 were prepared by extrapolation, using estimates prepared by the National Industrial Conference Board from fragmentary Census Bureau material [18], reports of tax commissions or similar agencies, correspondence with public officials, information obtained from sample surveys, and a variety of other sources.

Table III-3 presents the derivation of the estimates for the receipts categories shown in the NIPA tables, at the level of detail presented annually. Because the sources of information for States and localities differ, States are distinguished from local governments in table III-3, although this detail is not presented in the NIPA tables. As previously noted, data from *GF* are available with a 2-year lag and are incorporated in the third annual revision of the estimates. Estimates for the second annual revision are based on preliminary tabulations of unpublished *GF* data on State governments and BEA extrapolations of the *GF* data on local governments. Estimates for the first annual revision are based on BEA extrapolations of the *GF* data on both State and local governments. Table III-3 lists the sources of the estimates, indicating any differences among the various revisions. Also as previously noted, the *COG/GF* data are placed on a calendar year basis using the procedures described earlier in footnote 1, and several of the components have timing and other adjustments as well.

Table III-3 also indicates the procedure by which the quarterly estimates of the major types of taxes and nontaxes and contributions are derived. Quarterly seasonally adjusted estimates of taxes and nontaxes and contributions are prepared in one of three ways. (1) For those taxes and contributions for which the quarterly pattern of payments or liabilities reflects fluctuations in the tax or contribution base, the quarterly seasonally adjusted estimates are prepared by interpolating the annual estimates, using the seasonally adjusted measure of the tax base as the indicator; the initial effects of new legislative actions are estimated separately, where available and significant, and added in. An example of the use of this approach is personal income taxes, which are interpolated and extrapolated using as the indicator the seasonally adjusted monthly BEA wages and salaries less those of farm and private household workers. (2) For those taxes and contributions for which the quarterly pattern reflects less specific sources of variation or for which the choice of an indicator is less straightforward, the quarterly seasonally adjusted estimates are prepared by using the Census X-11 seasonal adjustment procedure to adjust the quarterly data directly; the initial effects of new legislative actions are estimated separately, where available and significant, and added in. An example of the use of this approach is severance taxes. (3) For taxes for which the quarterly obser-

vations show no seasonal variation, and for all taxes and nontaxes and contributions for which no quarterly data are available, the quarterly seasonally adjusted estimates are prepared by interpolating the annual totals quarterly without an indicator and extrapolating the current quarterly estimates judgmentally. Examples of the use of this approach are motor vehicle licenses, property taxes, nontaxes, and most taxes for which the source is *COG/GF*.

Quarterly unadjusted estimates also are prepared in one of three ways: (1) Where quarterly unadjusted data are available, they are the quarterly unadjusted estimates. (2) Where quarterly source data are unavailable, the quarterly unadjusted estimates are the same as the quarterly seasonally adjusted estimates described above. (3) In one case—corporate profits tax accruals—quarterly unadjusted estimates are interpolated from the annual estimates using an unadjusted measure of the tax base as the indicator.

In addition to the annual and quarterly estimates, monthly estimates are prepared for personal tax and nontax receipts and for personal contributions for social insurance because they are components of the personal income and outlay account (which is prepared on a monthly basis); although these estimates are presented in the NIPA tables, they are not covered in table III-3.

Taxes and nontaxes

For years after 1962, estimates for most taxes are prepared using data from the Census Bureau's *Quarterly Summary* and underlying unpublished detail; for these taxes, the annual estimates are the sum of four quarters of collections data, except for two taxes for which timing adjustments are necessary. The estimates for the remaining taxes—all local—are not well covered in the *Quarterly Summary* and thus are prepared on the basis of *COG/GF* data, as are the estimates of nontaxes. Before 1963, estimates of taxes and nontaxes consist of annual data on local taxes (with school district property taxes lagged 6 months) and the *State Finances* fiscal year State tax data converted to a calendar year basis by a simple average.

Although many of the tax and nontax items in the NIPA's are taken directly from the Census Bureau sources, others are distributed among several NIPA categories on the basis of other information. Local income taxes in the *Quarterly Summary* (and, until 1982, in *COG/GF*) include both individual and corporate income taxes; data from local jurisdictions that account for most of local corporate profits tax accruals are used to separate local corporate profits taxes from personal income taxes. Census Bureau data contain a category "property tax," with no distinction made with respect to the tax base—residential real property, other realty, business inventory or equipment, or personal property, such as furniture, personal autos, or pleasure boats. Using data from quinquen-

Table III-3.—State and Local Government Receipts: Sources of Estimates

Category	1982 estimates (Billions of dollars)		Sources	
	Fiscal	Calendar	Annual and quarterly unadjusted ¹	Quarterly seasonally adjusted
Receipts	437.5	449.4		
Personal tax and nontax receipts	100.1	104.9		
Income taxes	50.0	51.9		
State		47.0	QS ²	Interpolated and extrapolated using wages and salaries as indicator.
Local		4.9	QS. ² Modified to remove corporate profits tax.	Interpolated and extrapolated using wages and salaries as indicator.
Other taxes	9.5	9.8		
Estate and gift taxes		2.6		
State		2.5	QS	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Local .....		.1	5 percent of State estimate	5 percent of State estimate.
Motor vehicle licenses		4.6		
State		4.3	QS. Allocation between personal and business based on registrations.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Local .....		.2	QS. Equally divided between personal and business.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Property taxes		1.4		
State .....		.4	QS. Allocation between personal and business based on COG.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Local		1.0	QS. Allocation between personal and business based on COG.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Other taxes		1.3		
State .....		.6	QS. 90 percent of hunting and fishing licenses plus miscellaneous licenses.	Historical: QS—X-11. Current: Extrapolated judgmentally.
Local .....		.8	QS. 10 percent of local less income, sales, property, and motor vehicle.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Nontaxes	40.6	43.2		
State		15.6	3rd July: COG/GF—CCMGR. 1st and 2nd July: Extrapolated judgmentally ³ .	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Local		27.6	3rd July: COG/GF—CCMGR. 1st and 2nd July: Extrapolated judgmentally ³ .	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Addenda:				
Tuition and related educational charges		9.3	COG/GF—CCMGR. Annual estimates only.	Annual estimates only.
Hospital and health charges		24.6	COG/GF—CCMGR. Annual estimates only.	Annual estimates only.
Fines		3.4	COG/GF—CCMGR. Annual estimates only.	Annual estimates only.
Other		5.9	COG/GF—CCMGR. Annual estimates only.	Annual estimates only.
Corporate profits tax accruals	14.5	14.0		
State		13.1	QS. Collections related to liability for 2nd and 3rd July; estimated as function of PBT for 1st July ⁴ .	Interpolated and extrapolated using domestic PBT (less Federal Reserve bank profits), seasonally adjusted, as indicator.
Local		1.0	City reports gathered by BEA for 2nd and 3rd July; estimated as function of PBT for 1st July ⁴ .	Interpolated and extrapolated using domestic PBT (less Federal Reserve bank profits), seasonally adjusted, as indicator.

See footnotes at end of table

Table III-3.—State and Local Government Receipts: Sources of Estimates—Continued

Category	1982 estimates (Billions of dollars)		Sources	
	Fiscal	Calendar	Annual and quarterly unadjusted ¹	Quarterly seasonally adjusted
Indirect business tax and nontax accruals.	204.4	210.8		
Sales taxes		96.2		
State	78.8	80.3		
General		51.2	QS. ² Retimed to transactions basis by monthly retail sales.	Interpolated and extrapolated using monthly retail sales as indicator.
Gasoline		10.5	QS. ² Retimed to transactions basis by DOT highway fuel use.	Interpolated and extrapolated using DOT highway fuel use as indicator.
Liquor		2.7	QS ²	Interpolated and extrapolated using monthly liquor store sales as indicator.
Tobacco		4.1	QS ²	Interpolated and extrapolated using monthly 1982-dollar PCE for tobacco as indicator.
Public utilities		5.4	QS	Historical: QS—X-11.
Insurance receipts		3.5	QS	Current: Extrapolated judgmentally.
Other		3.0	QS	Historical: Interpolated without indicator.
				Current: Extrapolated judgmentally.
Historical: QS—X-11 separately for parimutuel and miscellaneous and amusement.				
Current: Extrapolated judgmentally.				
Local	15.0	15.9		
General		10.8	3rd July: COG/GF.	Interpolated and extrapolated using seasonally adjusted retail sales as indicator.
			1st and 2nd July: Extrapolated using retail sales as indicator ^{2 3 5} .	
Public utilities		3.2	3rd July: COG/GF.	Historical: Interpolated without indicator.
			1st and 2nd July: Extrapolated using State public utility taxes as indicator ^{3 5} .	Current: Extrapolated judgmentally.
Other		1.8	3rd July: COG/GF and QS.	Historical: Interpolated without indicator.
			1st and 2nd July: Extrapolated judgmentally, some QS ^{3 6} .	Current: Extrapolated judgmentally.
Property taxes	82.2	85.3		
State		2.8	QS. Allocation between personal and business based on COG.	Historical: Interpolated without indicator.
Local		82.5	QS. Allocation between personal and business based on COG.	Current: Extrapolated judgmentally.
Other taxes		29.3		Historical: Interpolated without indicator.
Motor vehicle licenses		2.1		Current: Extrapolated judgmentally.
State		1.9	QS. Allocation between personal and business based on registrations.	Historical: Interpolated without indicator.
Local .....		.2	QS. Equally divided between personal and business.	Current: Extrapolated judgmentally.
Severance taxes (State)		7.8	QS	Historical: QS—X-11.
Stock transfer and documentary (State) .....		.5	QS	Current: Extrapolated judgmentally.
Other		6.5		Historical: QS—X-11.
State		3.6	QS ⁷	Current: Extrapolated judgmentally.
Local		2.8	3rd July: COG/GF.	Historical: Interpolated without indicator.
			1st and 2nd July: Extrapolated judgmentally ³ .	Current: Extrapolated judgmentally.
Nontaxes	11.7	12.4		
State		5.5	3rd July: COG/GF—CCMGR.	Historical: Interpolated without indicator.
			1st and 2nd July: Extrapolated judgmentally ³ .	Current: Extrapolated judgmentally.
Local		6.8	3rd July: COG/GF—CCMGR.	Historical: Interpolated without indicator.
			1st and 2nd July: Extrapolated judgmentally ³ .	Current: Extrapolated judgmentally.
Addenda:				
Rents and royalties		7.5	COG/GF—CCMGR. Annual estimates only.	Annual estimates only.
Special assessments		1.6	COG/GF—CCMGR. Annual estimates only.	Annual estimates only.
Fines		1.1	COG/GF—CCMGR. Annual estimates only.	Annual estimates only.
Other		2.2	COG/GF—CCMGR. Annual estimates only.	Annual estimates only.

See footnotes at end of table

Table III-3.—State and Local Government Receipts: Sources of Estimates—Continued

Category	1982 estimates (Billions of dollars)		Sources	
	Fiscal	Calendar	Annual and quarterly unadjusted ¹	Quarterly seasonally adjusted
Contributions for social insurance.....	34.1	35.8		
Employer contributions		26.4		
State and local employee retirement		23.2	3rd July: <i>Ret. Sys.</i> .. 1st and 2nd July: Extrapolated judgmentally ³ .	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Temporary disability insurance.....		.1	SSB ³	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Workers' compensation.....		3.1	3rd July: <i>COG/GF</i> .. 1st and 2nd July: Extrapolated using wages salaries as indicator ^{3 4} .	Interpolated and extrapolated using wages and salaries as indicator.
Personal contributions		9.4		
State and local employee retirement		8.6	3rd July: <i>Ret. Sys.</i> .. 1st and 2nd July: Extrapolated using State and local wages and salaries as indicator ³ .	Historical: Interpolated using State and local wages and salaries as indicator. Current: Extrapolated judgmentally.
Temporary disability insurance.....		.9	SSB ³	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Federal grants-in-aid		83.9	<i>Budget of the U.S. Government</i>	MTS.

1. Except as noted, quarterly unadjusted estimates have the same source as the annual estimates.

2. Effects of legislative actions separately calculated, on the basis of contact with State revenue officials or from publications recording changes in State (and sometimes local) tax law.

3. Quarterly unadjusted estimates equal quarterly seasonally adjusted estimates.

4. Quarterly unadjusted estimates are interpolated and extrapolated using domestic profits before tax (less Federal Reserve bank profits) as indicator. See *Corporate Profits: Profits Before Tax, Profits Tax Liability, and Dividends*, Methodology Paper Series MP-2, for a description of the indicator.

5. The annual estimate for the earliest year in a July revision is prepared as a weighted average of *COG/GF* reports for adjacent years.

6. *Quarterly Summary* provides data on minor local sales taxes (gasoline, tobacco, liquor) accounting for \$0.2 billion of the \$1.8 billion.

7. Consists of the following taxes: Occupation and business licenses not elsewhere classified, corporate licenses-in-general, alcoholic beverage licenses, public utilities licenses, amusement licenses, miscellaneous taxes, and 10 percent of State hunting and fishing licenses.

8. Estimates are prepared separately for (1) coverage of State and local employees, with State and local wages and salaries as indicator, and (2) coverage of other workers, with private wages

and salaries as indicator.

Note.—"3rd July" and "1st and 2nd July" refer to the third annual revision and the first and second annual revisions, respectively.

CCMGR Current charges and miscellaneous general revenue. These, in *COG/GF*, are a set of receipts data. Here, CCMGR includes both data published by Census and the results of BEA analysis of underlying unpublished data. See appendix III-A.

COG/GF *Governmental Finances* and (in years ending in 2 or 7) *Census of Governments* volumes, both from Census Bureau. This includes not only the basic *GF* volume, but also *State Government Finances* and *County Finances*.

MTS *Monthly Treasury Statement*.

PBT Profits before tax.

OS *Quarterly Summary*. State quarterly data are unpublished detail; local data are derived residually.

Ret. Sys. *Finances of Employee-Retirement Systems of State and Local Governments*, a specialized publication in the *COG/GF* series.

SSB *Social Security Bulletin*.

nial COG reports on types of property subject to tax, the NIPA's distinguish between property taxes paid by persons and those paid by business. (The latter include all taxes paid on real property, including residential property, because owner-occupied dwellings are treated as a business in the NIPA's.) Census Bureau data for motor vehicle license taxes do not distinguish between those paid on business-owned vehicles and those paid on personal vehicles; the NIPA distinction is based on data from inventory estimates for business-used vehicles, based on motor vehicle registrations [54]. Census Bureau data on hunting and fishing licenses are allocated 90 percent to personal and 10 percent to business, the latter on the premise that businesses buy licenses for the purpose of entertaining clients. Both personal and business nontaxes are derived from COG/GF current charges and miscellaneous general revenue. The principles governing the distribution of these receipts into nontaxes, government sales, and enterprise revenue were explained in the Part I; the details of the derivation are shown in appendix table III-A-1.

Personal tax and nontax receipts.—From 1963 forward, the annual estimates of most personal taxes are prepared as the sum of four quarters of tax collections data from the *Quarterly Summary* and its underlying unpublished detail. Those that are not prepared from the *Quarterly Summary* are prepared from COG/GF. The annual estimates of personal nontaxes are prepared from unpublished data underlying COG/GF current charges and miscellaneous general revenue and, in addition, include the grossing adjustment discussed above for medicaid payments to public hospitals [42].

From 1963 forward, quarterly seasonally adjusted estimates of personal taxes and nontaxes are prepared using the approaches to seasonal adjustment already described: Personal income taxes are interpolated and extrapolated using NIPA wages and salaries as the indicator, State other personal taxes are seasonally adjusted directly, and the remaining taxes and nontaxes are interpolated without indicator. Current quarterly estimates of all but personal income taxes are judgmental extrapolations. For 1959–62, quarterly seasonally adjusted estimates of all personal taxes and nontaxes are interpolated from the annual estimates, without an indicator.

Estimates are prepared monthly, as well as quarterly and annually, because they are a component of the personal income and outlay account. For personal income taxes, monthly estimates are prepared by interpolation using NIPA wages and salaries as the indicator; the impact of legislative actions is estimated on a monthly basis to complete the estimates. For all other personal taxes and nontaxes, the monthly estimates are interpolated without indicator from the quarterly seasonally adjusted series and extrapolated judgmentally.

Corporate profits tax accruals.—The basic source of annual data on State corporate profits tax accruals is unpublished State detail on collections data underlying the Census Bureau's *Quarterly Summary*. To relate collections to calendar year liabilities, the quarterly data are lagged on the basis of a 1977–78 BEA study of certain features of State corporate laws—when estimated taxes were due, settlements made, etc. This study, based on the Commerce Clearing House *State Tax Guide* [11], provided information on the relationship between tax collection and tax liability; for each annual revision, the relationship between tax collections and liabilities is modified as required to reflect changes in tax laws.

Data for local corporate profits taxes are not available from any single source. In recent years, data obtained from New York City [10] and information from the tax office of Washington, DC, have been incorporated; since about 1970, these two cities have accounted for almost all of local profits taxes. For earlier years, the estimates are based on Tax Foundation [21] estimates prepared for several years around 1965.

Quarterly estimates of total State and local corporate profits tax accruals, seasonally adjusted and unadjusted, are prepared from the annual liability totals by interpolation and extrapolation using NIPA estimates of domestic corporate profits before tax (less Federal Reserve profits), as the indicator. (See *Corporate Profits: Profits Before Tax, Profits Tax Liability, and Dividends*, Methodology Paper Series MP-2, for a description of these estimates.)

Indirect business tax and nontax accruals.—From 1963 forward, indirect business tax data are from the *Quarterly Summary* and underlying unpublished detail, with a few exceptions. Annual data for most State taxes are the sum of four quarters of *Quarterly Summary* collections data. For State general sales taxes and State gasoline taxes, however, the quarterly collections data are lagged 1 month in proportion to retail sales [25, with some BEA modification] and fuel consumption [54], respectively, to derive the appropriate NIPA liability measure.

The annual estimates of local sales taxes, local motor vehicle licenses, local miscellaneous indirect business taxes, and all nontaxes are based primarily on COG/GF. Quarterly seasonally adjusted estimates are prepared by interpolation without an indicator, except for local general sales taxes, which are interpolated using retail sales as the indicator. Current quarterly estimates are extrapolated judgmentally.

Quarterly seasonally adjusted estimates are prepared using the three approaches already described. State and local general sales and use taxes and State taxes on gasoline, liquor, and tobacco are interpolated and extrapolated from the annual estimates using the tax base as the indicator; estimates of the effects of legislative action are estimated separately and added. Unadjusted quarterly data for State public utilities gross receipts taxes, other State sales taxes

(parimutuel taxes, miscellaneous gross receipts taxes, and amusement sales taxes), State severance taxes, and State documentary and transfer taxes are seasonally adjusted directly, using the Census X-11 procedure. For property taxes and all remaining taxes, the quarterly seasonally adjusted estimates are interpolated from the annual estimates without indicator, and current estimates are extrapolated judgmentally. The last procedure is also used for quarterly estimates of both State and local indirect business nontaxes.

Contributions for social insurance

Annual estimates of contributions for social insurance are prepared at the level of detail shown in table III-3. Estimates are prepared monthly, as well as quarterly and annually, because they are a component of the personal income and outlay account.

The source for annual estimates of both employer and personal contributions to State and local employee retirement funds is the Census Bureau publication *Retirement Systems*. To derive calendar year estimates, the annual data for individual retirement funds are grouped by the ending month of their fiscal years and then weighted by the number of months that fall into each calendar year. Monthly seasonally adjusted estimates of employer contributions are interpolated from the annual estimates without indicator. Monthly seasonally adjusted estimates of personal contributions are interpolated using State and local government employee wages and salaries as the indicator. For both employer and personal contributions, current monthly estimates are extrapolated judgmentally. Quarterly estimates are summed from the monthly estimates.

Data for employer and personal contributions to temporary disability insurance funds are from the *Social Security Bulletin: Annual Statistical Supplement*, published by the Social Security Administration (SSA) [45]. Monthly seasonally adjusted estimates are interpolated from the annual estimates without indicator; the current monthly estimates are extrapolated judgmentally. Quarterly estimates are summed from the monthly estimates.

Fiscal year data for employer contributions—there are no personal contributions—to State-administered workers' compensation funds are from *State Finances* and are averaged to estimate calendar year totals. Monthly estimates are interpolated from the annual estimates using State and local government employee wages and salaries as the indicator for contributions for State and local government employees and private wages and salaries for the remainder; the current monthly estimates are extrapolated judgmentally. Quarterly estimates are summed from the monthly estimates.

Federal grants-in-aid

See Part II, Federal Government Transactions.

Expenditures

The primary source data for the estimates of expenditures are *COG/GF—Governmental Finances* [29], *State Government Finances* [32] and, in years ending in 2 or 7, the census of governments volumes [24], all from the Census Bureau. In addition, *Retirement Systems* [27], a specialized publication in the *COG/GF* series, provides the basic data on employee retirement funds for all years after 1959. Other sources include the construction statistics prepared by the Census Bureau [26], data on transfer payments from HHS [40, 41, 42, 44, 45], and the employment and wage and salary statistics prepared by the Bureau of Labor Statistics (BLS) [50, 51].

Estimates of expenditures for years before 1952 are based on State Finances and the available Census Bureau estimates of local expenditures, the Census Bureau construction statistics, information on transfer payments from HHS, and the BLS employment and earnings statistics. For the years before 1942 for which the data are fragmentary, the estimates of purchases other than construction and compensation are prepared by interpolation, using State and local compensation as the indicator.

Table III-4 presents the derivation of the estimates for the expenditure categories shown in the NIPA tables, at the level of detail presented annually. Although the sources of information for States and localities differ, States are not distinguished from local governments in table III-4 or in the NIPA tables. As previously noted, data from *GF* are available with a 2-year lag and are incorporated in the third annual revision of the estimates. Estimates for the second annual revision are based on preliminary tabulations of unpublished *GF* on State governments data and BEA extrapolations of the *GF* data on local governments. Estimates for the first annual revision are based on BEA extrapolations of the *GF* data for both State and local governments. Table III-4 lists the sources of the estimates, indicating any differences among the various revisions. Also as previously noted, the *COG/GF* data are placed on a calendar year basis using the procedures described earlier in footnote 1, and several of the components have timing and other adjustments as well.

Table III-4 also indicates the procedure by which the quarterly estimates of the major types of expenditures are derived. Quarterly (and, where necessary, monthly) seasonally adjusted estimates of expenditures are prepared using one of three approaches: (1) For those expenditures for which quarterly data are available, the quarterly seasonally adjusted estimates are prepared by using the Census X-11 seasonal adjustment procedure to adjust the quarterly data directly. (2) For those expenditures for which only annual data are available but for which the quarterly pattern of outlays may be assumed to reflect fluctuations in another expenditure component or in some other related series, the quarterly seasonally adjusted

Table III-4.—State and Local Government Expenditures: Sources of Estimates

Category	1982 estimates (Billions of dollars)		Sources	
	Fiscal year	Calendar year	Annual	Quarterly ¹
Expenditures	401.9	414.3		
Purchases of goods and services	356.3	369.0		
Compensation of employees ²	218.3	226.9		
Wages and salaries		183.8	BLS tabulations	Historical: Interpolated using preliminary estimates as indicator. Current: Extrapolated judgmentally.
Employer contributions for social insurance: State or locally administered system		23.2	3rd July: <i>Ret. Sys.</i> 1st and 2nd July: Extrapolated judgmentally.	Historical: Interpolated using preliminary estimates as indicator. Current: Extrapolated judgmentally.
Federally administered system		3.2	<i>SSB</i>	Interpolated and extrapolated using State and local wages and salaries as indicator.
Other labor income		16.7	3rd July: <i>COG/GF</i> , insurance carrier reports. 1st and 2nd July: Extrapolated judgmentally, insurance carrier reports.	Historical: Interpolated using preliminary estimates as indicator. Current: Extrapolated judgmentally.
Structures	45.1	43.7		
New		43.6	<i>Census C-30, Highway Statistics</i>	<i>Census C-30—X-11, Highway Statistics.</i> ³
Existing (net)		1.2	<i>COG/GF; CCMGR</i>	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Less: Force-account compensation		1.1	I-O benchmarks interpolated and extrapolated using highway, education, and all other new construction as indicators.	Historical: Interpolated and extrapolated using hospital, education, and all other new construction as indicators. Current: Extrapolated using highway new construction as indicator.
Financial services furnished without payment by financial institutions except life insurance carriers and private noninsured pension plans.	3.0	3.3	FDIC and FRB data on ownership of deposits and property income receipts of commercial banks.	Historical: Interpolated using FFA State and local holdings of demand and time deposits as indicator. Current: Extrapolated judgmentally.
Other goods and services	90.0	95.1	3rd July: <i>COG/GF, SF, COG/GF—CCMGR, Bowker.</i> 1st and 2nd July: Extrapolated judgmentally, Bowker.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Transfer payments to persons	76.4	79.9		
Benefits from social insurance funds		23.0		
State and local employee retirement		19.3	3rd July: <i>Ret. Sys.</i> 1st and 2nd July: Extrapolated judgmentally.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Temporary disability insurance		1.0	<i>SSB</i>	Historical: Interpolated without indicator. ⁴ Current: Extrapolated judgmentally.
Workers' compensation		2.7	3rd July: <i>SF.</i> 1st and 2nd July: Extrapolated judgmentally.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Public assistance		51.8		
Medical care ⁵		31.7	<i>HCFA</i>	Historical: Interpolated without indicator. ³ Current: Extrapolated judgmentally.
Aid to families with dependent children (AFDC)		13.3	<i>OFA</i>	<i>OFA (monthly)—X-11.</i> ³
Supplemental security income		2.1	<i>ORS-SSA</i>	<i>ORS-SSA (monthly)—X11.</i> ³
General assistance ⁶		1.9	State reports	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Energy assistance		1.6	Federal grants; <i>SSB</i>	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Other ⁷		1.2	<i>OFA; ORS-SSA</i>	Historical: <i>OFA, ORS-SSA—X-11.</i> ³ Current: Extrapolated judgmentally.

See footnotes at end of table

Table III-4.—State and Local Government Expenditures: Sources of Estimates—Continued

Category	1982 estimates (Billions of dollars)		Sources	
	Fiscal year	Calendar year	Annual	Quarterly ¹
Transfer payments to persons— Continued				
Education ⁸		2.7	3rd July: <i>SF</i> . 1st and 2nd July: Extrapolated judgmentally.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Employment and training ⁹		1.1	3rd July: Federal grants. 1st and 2nd July: Extrapolated judgmentally.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Other		1.3	3rd July: <i>SF</i> , OFA, Department of Justice, State of Alaska. 1st and 2nd July: Extrapolated judgmentally, State of Alaska.	Historical: Interpolated without indicator, State of Alaska—X11. Current: Extrapolated judgmentally.
Net interest paid	-21.9	-24.4		
Interest paid	24.9	27.1	3rd July: <i>COG/GF</i> . 1st and 2nd July: Extrapolated judgmentally.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Less: Interest received by government....	46.8	51.5		
Monetary	43.8	48.2		
Other funds		26.2	3rd July: <i>COG/GF</i> , CCMGR. 1st and 2nd July: Extrapolated judgmentally.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Social insurance funds:				
Workers' compensation.....		1.2	3rd July: <i>SF</i> . 1st and 2nd July: Extrapolated judgmentally.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Temporary disability insurance ¹⁰ .....		.1	3rd July: <i>SF</i> . 1st and 2nd July: Extrapolated judgmentally.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Retirement systems		20.8	3rd July: <i>Ret. Sys.</i> . 1st and 2nd July: Extrapolated judgmentally.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Imputed	3.0	3.3	FDIC and FRB data on ownership of deposits and property income receipts of commercial banks.	Historical: Interpolated using FFA State and local government holdings of demand and time deposits as as indicator. Current: Extrapolated judgmentally.
Less: Dividends received by government.	2.7	2.9		
Retirement systems		2.8	Sum of quarters.....	Historical: <i>Selected Retirement</i> ; Standard & Poor's dividend/price ratioSee text. Current: Extrapolated judgmentally.
Government .....		.2	3rd July: <i>SF</i> . 1st and 2nd July: Extrapolated judgmentally.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.

See footnotes at end of table

Table III-4.—State and Local Government Expenditures: Sources of Estimates—Continued

Category	1982 estimates (Billions of dollars)		Sources	
	Fiscal year	Calendar year	Annual	Quarterly ¹
Subsidies less current surplus of government enterprises.	-6.1	-7.3		
Subsidies .....		.5	Assoc. of Amer. Railroads: 1983 estimate extrapolated judgmentally.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Less: Current surplus of government enterprises.		7.8		
Current operating receipts		57.1	3rd July: <i>COG/GF</i> , <i>COG/GF</i> —CCMGR, <i>MTS</i> , <i>Highway Statistics</i> , "Gaming and Wagering Business," State reports on off-track betting. 1st and 2nd July: Extrapolated judgmentally, <i>MTS</i> , <i>Highway Statistics</i> , "Gaming and Wagering Business," State reports on off-track betting.	Historical: Interpolated without indicator, <i>MTS</i> —X11. ³ Current: Extrapolated judgmentally.
Current operating outlays		49.4	3rd July: <i>COG/GF</i> , <i>COG/GF</i> —CCMGR, <i>Highway Statistics</i> , "Gaming and Wagering Business," State reports on off-track betting, <i>SF</i> , <i>Ret. Sys.</i> 1st and 2nd July: Extrapolated judgmentally, <i>Highway Statistics</i> , "Gaming and Wagering Business," State reports on off-track betting.	Historical: Interpolated without indicator. Current: Extrapolated judgmentally.
Addenda:				
Water and sewerage		2.3	Receipts less expenditures	Annual estimates only.
Gas and electricity		3.5	Receipts less expenditures	Annual estimates only.
Toll facilities		1.1	Receipts less expenditures	Annual estimates only.
Liquor stores .....		.5	Receipts less expenditures	Annual estimates only.
Air and water terminals		1.1	Receipts less expenditures	Annual estimates only.
Housing and urban renewal		1.3	Receipts less expenditures	Annual estimates only.
Public transit		-3.5	Receipts less expenditures	Annual estimates only.
Other		1.5	Receipts less expenditures	Annual estimates only.
Less: Wage accruals less disbursements.	0	0	Reports from jurisdictions affected by strikes.	Reports from jurisdictions affected by strikes.
Surplus or deficit (-), national income and product accounts.	35.6	35.1	Total receipts less total expenditures	Total receipts less total expenditures.
Social insurance funds		36.9	Net sum of social insurance fund components above.	Net sum of social insurance fund components above.
Other		-1.7	Total less social insurance funds.	Total less social insurance funds.

1. Except as noted, quarterly seasonally adjusted and unadjusted estimates are the same.

2. Allocation between general government and government enterprises based on *Public Employment*.

3. Unadjusted quarterly estimates from same source as annual.

4. Before 1980, monthly data were available from the Department of Labor.

5. Medical vendor payments, mostly Medicaid; for remainder, only ad hoc studies available after 1982.

6. Before 1981, data available from HHS.

7. Emergency assistance and medical premium payments for indigents.

8. Scholarship funds for State universities and colleges; State grants to private educational institutions.

9. Since 1982, payments to nonprofit institutions administering training programs.

10. Data from California, New Jersey, New York, and Rhode Island.

Note.—"3rd July" and "1st and 2nd July" refer to the third annual revision and the first and second annual revisions, respectively.

CCMGR

Census C-30
COG/GF

ETA
Federal grants
HCFA

MTS
OFA

ORS-SSA
Ret. Sys.

Selected
Retirement
SF
SSB

Current charges and miscellaneous general revenue. These, in *COG/GF*, are a set of receipts data. Here, CCMGR includes both data published by Census and the results of BEA analysis of underlying unpublished detail.

Current Construction Reports: Value of New Construction Put in Place, Governmental Finances and, in years ending in 2 or 7, census of governments volumes, both from Census Bureau. This includes not only the basic *GF* volume, but also *State Government Finances* and *County Finances*.

Employment and Training Administration, U.S. Department of Labor. Federal grants to State and local governments. See part II, Health Care Financing Administration, U.S. Department of Health and Human Services.

Monthly Treasury Statement, Office of Family Assistance, U.S. Department of Health and Human Services.

Office of Research and Statistics, Social Security Administration. *Finances of Employee-Retirement Systems of State and Local Governments*, a specialized publication in the *COG/GF* series. *Finances of Selected Public Employee-Retirement Systems*.

State Government Finances, *Social Security Bulletin*.

BLS tabulations

BLS tabulations of average weekly hours and of employment and wages reported by employers covered by State unemployment insurance programs.

estimates are prepared by interpolating the annual estimates, using a seasonally adjusted measure of the expenditure component or other related series as indicator. (3) For those expenditures for which neither quarterly data nor any indicator are available, the quarterly seasonally adjusted estimates are prepared by interpolating the annual totals quarterly without an indicator and extrapolating the current quarterly estimates judgmentally.

Quarterly unadjusted estimates also are prepared in one of two ways: (1) Where quarterly data are available, they are the quarterly unadjusted estimates. (2) Where quarterly source data are unavailable, the quarterly unadjusted estimates are the same as the quarterly seasonally adjusted estimates described above.

In addition to the annual and quarterly estimates, monthly estimates are prepared for transfer payments to persons because they are components of the personal income and outlay account; although these estimates are presented in the NIPA tables, they are not covered in table III-4.

Purchases of goods and services

State and local government purchases are classified as durable goods, nondurable goods, services, and structures. For estimation, two types of services are treated separately. They are compensation of employees and services furnished without payment by depository institutions. The remaining services, along with durable and nondurable goods, are first estimated in total. The total is then distributed among durable goods, nondurable goods, and other services.

With the exception of compensation, new construction, and imputed financial services, no comprehensive direct measure of purchases, by commodity, are available for State and local governments. Instead, government expenditures in *COG/GF* are classified by function—that is, by the purpose of the expenditure. (The functions are listed in appendix B.) Therefore, an indirect procedure is used to estimate purchases of goods and services, by commodity, from the annual *COG/GF* functional data on current operation, capital outlay, and general government sales. The procedure uses benchmark information, by function, on the commodity composition of State and local government purchases from the BEA input-output (I-O) tables.

Table III-4 shows the sources used for the estimates of compensation of employees, structures, services furnished without payment by depository institutions, and all other goods and services. The sources for the last, summarized as *COG/GF* in table III-4, are more extensive in fact, and the procedure in which they are used is described more fully in table III-5.

Compensation of employees.—Compensation of employees consists of wages and salaries, employer contributions for social insurance, and other labor income—that is, employer payments to private pen-

sion, group health insurance, and group life insurance plans and several minor categories of employee compensation (compensation of prison inmates and judicial fees to jurors and witnesses).

For wages and salaries, the annual estimates are based on BLS tabulations of employment and wages reported by employers covered by State unemployment insurance programs [50, 51]. For employer contributions for social insurance, the annual estimates are based on the estimates described above for receipts of employer contributions to State and local government employee retirement funds [27] and on Social Security Administration data on old-age, survivors, disability and health insurance (OASDHI) contributions [45]. For other labor income, the annual estimates are based on *COG* data on the group health and life insurance coverage of State and local government employees and on employer contributions to these programs [24] and annual Census Bureau data on State and local government employment [30]; annual reports of private pension and insurance carriers [1, 5, 15, 23, 43]; annual data on average compensation of Federal prison inmates and on numbers of State prison inmates [14, 47]; and *GF* data on judicial expenditures.

Quarterly seasonally adjusted estimates of compensation are summed from monthly series, the basis on which they are prepared. Wages and salaries, employer contributions for social insurance (other than to Federal systems), and other labor income are interpolated using the preliminary estimates as indicator. Employer contributions to Federal systems are interpolated using State and local wages and salaries as the indicator. Current quarterly (and monthly) estimates are extrapolated judgmentally.

The source data for compensation cover all State and local government employees; they are distributed between compensation paid to employees of government enterprises and that paid to employees of general government. (The former is part of the derivation of the surplus of government enterprises; enterprise current-account purchases are not included in government purchases of goods and services.) Wages and salaries is distributed using data on wages and salaries from the Census Bureau's October survey of public employment [30]. Certain supplements (chiefly pension fund contributions and some health and life insurance programs dedicated to education employees) are assigned to the particular categories of employees; the rest are allocated among employees of government enterprises and general government essentially in proportion to wages and salaries for the two groups.

Structures.—Purchases of structures consist of new construction put in place and purchases (net of sales) of existing structures. Compensation paid to State and local government employees engaged in force-account construction is subtracted from the value of new construction put in place to avoid double-counting because it is included in general government compensation.

Estimates of purchases of new construction put in place are obtained, for the most part, from the Census Bureau [26], which, since 1975, has conducted a direct survey of construction projects in which information is gathered about the value of construction completed each month on a sample of projects. (Before 1975, data on construction expenditures were collected monthly and lagged 1 month to approximate the put-in-place timing.) For nine types of construction, these monthly unadjusted data are summed to a calendar year series. Monthly seasonally adjusted estimates are prepared, using the Census X-11 seasonal adjustment procedure. Quarterly estimates are summed from the monthly series.

BEA departs from the Census Bureau construction data because of evident underreporting in three cases. (1) For the years 1972–75, as funds from the Federal Clean Water Act become available, BEA modified the Census Bureau sewer construction data because the sample design for the expenditures survey was not totally successful in capturing a representative component of the new special districts created to build and operate new systems. (2) For 1975 and later years, BEA bases its annual estimates of highway construction on data from *Highway Statistics* [54], Federal Highway Administration, because of known problems in the put-in-place data for highways from the Census Bureau construction statistics and the annual highway expenditures estimates from *COG/GF*. The Federal Highway Administration data are adjusted to remove expenditures for resurfacing, restoration, and rehabilitation, which are classified as maintenance and repair—not new construction—in the NIPA's. Monthly estimates are prepared by interpolation and extrapolation, using the Census Bureau construction series as the indicator. Quarterly estimates are summed from the monthly estimates. (3) For 1983 and later years, BEA adjusts the Census Bureau estimate of public electric generating plants to include the publicly owned component of jointly constructed plants where the State or local government is a minority participant. This component has been omitted in the Census Bureau put-in-place compilation. The adjustments are based on annual data from the Department of Energy [37]; quarterly seasonally adjusted estimates are prepared by interpolation, using the Census Bureau series as an indicator.

Estimates of net purchases of existing structures are based on data from *COG/GF*. The Census Bureau reports combined purchases of equipment, land, and existing structures and sales of property—that is, land and existing structures—by function, for both States and localities³. (Equipment purchases are purchases of durable goods and are discussed below.) Because land transactions are excluded from NIPA government

purchases, BEA prepares estimates of the value of purchases of existing structures, excluding land. Ratios, from BEA input-output (I-O) tables, are used to separate purchases of structures from those of land, by function. Sales of structures and land are separated using the overall ratio of purchases of structures to those of land. State sales of property are from *State Finances*, and local sales are from a BEA analysis of *COG/GF* miscellaneous general revenues. Sales are netted against purchases to derive net purchases of existing structures. Quarterly seasonally adjusted estimates are interpolated without indicator from the annual estimates, and current estimates are extrapolated judgmentally.

Annual estimates of general government force-account compensation—that is, compensation paid by State and local government on own-workforce new construction (other than enterprise construction)—are prepared using the I-O tables, which have estimates of this compensation by type of construction, by function. Ratios of force-account compensation to the value of new construction, by type, are interpolated without indicator between I-O years and extrapolated. The annual estimates are the product of these ratios and annual data on new construction put in place, by type. Quarterly seasonally adjusted estimates of highway, education, and all other force account construction are prepared by interpolation, using seasonally adjusted Census Bureau highway, education, and all other construction as the indicators. Highway construction is used as the indicator for the current estimates because most force-account new construction compensation relates to highway planning.

Financial services.—Government purchases of services includes an imputation for the estimated value of services rendered to State and local governments without payment by depository institutions—that is, financial intermediaries except life insurance carriers and private noninsured pension plans.

The derivation of the annual and quarterly estimates of imputed interest is based on data from the Federal Deposit Insurance Corporation and the Federal Reserve Board data on property income paid and received by commercial banks and on the ownership of deposits [6, 7, 13]; it is explained below in the discussion of the net interest component of expenditures.

Durable goods, nondurable goods, and other services.—BEA prepares annual estimates of the remaining purchases from *COG/GF* and *State Finances* data for expenditures on current operation and equipment and for general government sales, separately for States and for localities, for each of the functions shown in appendix III-B.

Table III-5 traces the derivation of the estimates of purchases of other goods and services—that is, goods and services other than compensation, structures, and financial services—from *COG* data for: Current operating expenditures; expenditures on equipment, land,

3. For years after 1978, the Census Bureau separates purchases of equipment from those of land and existing structures only for States. BEA estimates equipment purchases of local governments, using pre-1978 information on the relationships, by function, among equipment, land, and existing structures.

and existing structures; and the government sales categories of *COG* "current charges and miscellaneous general revenue." (If a noncensus year were used, the data source would be *GF*, but the procedure would be the same.) For brevity, table III-5 does not make explicit the functional detail or the separate treatment for States and localities; where appropriate, the notes cite the use of published functional detail, of unpublished detail that underlies the published *COG*.

The derivation in table III-5 starts with *COG* data for current operating expenditures. The first step is to subtract salaries and wages (except for 1978–81, when the *COG/GF* data classified them separately). The second step is to subtract other current operating expenditures that are not NIPA purchases of other goods and services: Pay-related outlays that are included in NIPA compensation (as other labor income), payments that are included in NIPA transfer payments, enterprise expenditures for operations, and subsidies paid to railroads. The third step is to separate purchases of equipment from *COG* data on equipment, land, and existing structures, as described in the discussion of structures above. The fourth step is to add these equipment estimates to other current operating expenditures, as modified in the first two steps; the sum equals gross purchases. The fifth step is to subtract government sales from gross purchases because they are treated as offsets to purchases in the NIPA's; the result equals net purchases.

The functional detail, which is not explicit in table III-5, is used to distribute gross purchases, sales—and, thus, net purchases—among durable goods, nondurable goods, and other services. For each general government function, steps one and two yield annual current-dollar estimates of (1) the remainder of other expenditures on current operation and (2) government sales. For each general government function and each enterprise function, step three yields annual current-dollar estimates of equipment purchases. In addition, data on libraries from the Association of American Publishers [3] and from Bowker's [8] are used to estimate purchases of books and audiovisual materials by four functions—elementary and secondary education, higher education, public libraries, and general control. For each of these functions, the estimates of books and audiovisual equipment are classified as gross purchases of durable goods and are subtracted from the remainder of other expenditures on current operations.

The remainder of other expenditures on current operations is distributed, by function, among gross purchases of nondurable goods, gross purchases of other services, and gross purchases of equipment parts, using benchmark information on the commodity composition of purchases, also classified by function, from BEA's benchmark I-O tables [34].⁴ Purchases of equipment parts are classified as gross purchases of durable

goods, as are purchases of equipment and, as previously mentioned, books and audiovisual equipment. Government sales are also distributed, by function, among sales of durable goods, nondurable goods, and other services, using the I-O benchmark commodity detail. The estimates of (net) purchases of durable goods, nondurable goods, and other services are derived by subtracting sales from gross purchases.

Quarterly seasonally adjusted estimates are interpolated from the annual all-function totals of each of the major categories without indicator. The current quarterly estimates are derived, as explained below, by extrapolating the constant-dollar estimates judgmentally and converting them to current dollars with appropriate price indexes.

Transfer payments to persons

State and local government transfer payments to persons consist of benefits from social insurance funds; public assistance; and payments for education, employment and training, and other assistance. Estimates are prepared monthly, as well as quarterly and annually, because they are a component of the personal income and outlay account. The derivation of these estimates is shown in table III-4.

Benefits from social insurance funds.—Benefits from social insurance funds consist of State and local employee retirement benefits, including withdrawals from pension systems; temporary disability insurance benefits; and workers' compensation benefits. BEA prepares monthly seasonally adjusted estimates for each of these by interpolating the calendar year totals without an indicator and extrapolating the current estimates judgmentally; quarterly estimates are summed from the monthly estimates.

Annual data on benefits from State and local government employee retirement systems are from the Census Bureau's *Retirement Systems* report, adjusted to a calendar year basis as described above under contributions for social insurance. Annual estimates of temporary disability insurance benefits are from the reports of the State-run systems providing these benefits [45]. Annual estimates of workers' compensation benefits are from *State Finances*.

Public assistance.—Public assistance consists of medical care, aid to families with dependent children (AFDC), supplemental security income (SSI), cash general assistance, low-income energy assistance, emergency assistance, and medical insurance premiums paid on behalf of indigents.

Medical care—that is, medical vendor payments—is government payments on behalf of indigents for medical services, drugs, and other medical supplies. Most of these payments are for the federally assisted Medicaid program; the remaining payments are State and local general assistance. Since 1983, calendar year estimates of medical vendor payments are based on quarterly data from the Health Care Financing Ad-

4. The I-O benchmark commodity detail and its use in this distribution is described in the section on constant-dollar estimates.

Table III-5.—Derivation of State and Local Government Purchases of Goods and Other Services, FY 1982

Census/NIPA Category	Table III-2 referent		FY 1982 estimate (Billions of dollars)	Source	Notes
	col.	line			
Current operating expenditures.....	1	2	375.1	Direct from COG/GF	
Less: Salaries and wages	1	3	190.3	Various	For years after 1981, these data are derived from: 1) Data from the Census publication <i>Public Employment</i> ; 2) direct measures within the context of COG/GF for education wages and salaries; these data are surveyed for the Department of Education. For 1977-81, directly measured from unpublished GF data. For years before 1978, only the first of these two approaches is available.
Less: Supplements to wages and salaries.	11	4	25.9	Various	Certain supplements to wages and salaries are included in the COG/GF current operating expenditures; they are identified here:
OASDHI			8.2		NIPA data on OASDHI contributions paid by State and local governments as employers.
Health and life insurance (includes TIAA).			9.1		NIPA data on payments by State and local governments as employer to private insurers (benchmarked to <i>Census of Governments</i> surveys of employee benefits).
Retirement.....			6.4		Payments by local governments as employers to State administered retirement systems, published as an exhibit in COG/GF.
Workers' compensation, private .....			.8		NIPA data from insurance industry sources. These payments are by State and local governments as employers to private insurers for workers' compensation.
Workers' compensation, public.....			.6		BEA estimate of payments by local governments as employers to State-administered workers' compensation systems. The estimate is based on payments for State employees (published in <i>State Finances</i>). An average payment per State employee is derived, and multiplied by the number of local employees.
Unemployment compensation .....			.5		NIPA data on unemployment compensation contributions paid by State and local governments as employers.
Judicial system payments.....			.5		NIPA data, primarily for payments made to jurors. Estimated as a function of State judicial system current operating expenditures, in <i>State Finances</i> .
Less: Current operating expenditures classified as transfers to persons.	14	4	30.2	COG/GF direct; Federal NIPA data; HHS.	\$26.1 billion of this total is medical vendor payments directly identified in GF. Another \$2.5 billion is identified from Federal data on two Federally assisted programs: Low-income energy assistance and job-training programs. Almost all of the remainder is transfers for foster care programs; estimates are based on unpublished Census Population Division data and occasional studies by nonprofit organizations.
Less: Enterprise operating expenditures and subsidies paid to railroads.	17	4	35.1	COG/GF direct	Most of these expenditures are identified directly in functional terms; e.g., all current operating expenditures for the function air terminals, or parking, are classified as enterprise operating expenditures. About \$1.5 billion (all in local governments) is not directly available from COG/GF. Data on local toll facilities are taken from DOT <i>Highway Statistics</i> ; for off-track betting and the D.C. lottery by direct contact with localities; and for miscellaneous commercial activities from unpublished BEA research into Census Bureau records for large local governments.
Plus: Equipment, land, and existing structures.	1	7	13.1	COG/GF direct measure.	Until 1977, COG/GF identified equipment separately from land and existing structures. For 1978 and later, all three items are measured as one value in COG/GF. BEA estimates the equipment component, using <i>State Governments Finances</i> and <i>School Finances</i> where available, and historical relationships (by function) from before 1977.
Less: Land	5	7	2.7	COG/GF-derived	After equipment is identified, the residual land and existing structures is further divided, using relationships derived by function from I-O studies. Land is separately identified so that it can be excluded from NIPA expenditure measures. (Land sales are also excluded from NIPA measures of receipts).

Table III-5.—Derivation of State and Local Government Purchases of Goods and Other Services, FY 1982—
Continued

Census/NIPA Category	Table III-2 referent		FY 1982 estimate (Billions of dollars)	Source	Notes
	col.	line			
Less: Existing structures	12	7	1.5	COG/GF-derived	Expenditures on existing structures are removed here because in the NIPA's they are a part of the structures component of purchases of goods and services.
Plus: Calendar-year adjustments	7	4	0.6	BEA	After purchases other than compensation and structures are identified for a given GF year, the data are retimed to calendar years. For State data, two adjacent COG/GF reports are averaged to produce a calendar year. Local governments are retimed by a slightly different process, reflecting the fact that local governments in any one COG/GF report have many different fiscal years. After calendar years are derived for States and localities, quarters are derived by interpolating without an indicator. The \$0.6 billion is the difference between the original COG/GF-derived data, and the interpolated results averaged to a July-June year.
Equals: Gross all other purchases	13	14	103.1	.....	This residual comprises purchases excluding compensation, structures, and imputed financial services.
Less: Census receipts treated in NIPA's as offset to purchases.	6	14	13.0	COG/GF current charges and miscellaneous general revenue.	Partly direct identification in published source e.g., school lunch charges. Remainder identified from unpublished BEA analysis of the published data. See table A-1, analysis of current charges and miscellaneous general revenue.
Less: Timing and other adjustments	8	14	.1	BEA	Made as required to conform results of calendar-year interpolation to fiscal-year totals.
Equals: Other purchases of goods and services, NIPA's.	13	11	90.0	.....	Gross all other purchases, less offsetting receipts. Adjusted as required for timing.

1. Less: Financial imputation, column 5, line 4.

COG/GF Census of Governments and/or Governmental Finances
HHS U.S. Department of Health and Human Services
TIAA Teachers' Insurance and Annuity Association

ministration (HCFA), HHS [41]; previously, data were available monthly from HCFA and predecessor organizations. From 1982 forward, the general assistance component is estimated on the basis of a study for 1983 [12] and various information from States that have such programs; previously, the HHS monthly data for medicaid included general assistance medical payments. For 1984 and later years, the monthly and quarterly seasonally adjusted estimates are interpolated from the annual data without an indicator. Before 1984, when the series exhibited measurable seasonality, the monthly data were seasonally adjusted using the Census X-11 seasonal adjustment procedure.

Monthly data for AFDC and for emergency assistance are from the Office of Family Assistance, HHS [40]; the AFDC data are supplemented by information from the Administration for Children, Youth, and Families, HHS [38]. The monthly data are seasonally adjusted, using the Census X-11 seasonal adjustment procedure. Annual and quarterly estimates are summed from the monthly estimates.

Monthly data for SSI are from the Social Security Administration, HHS [46]. In January 1974, the Federal SSI program replaced aid to the blind, old age assistance, and aid to the permanently and totally disabled. State governments that chose to continue their own SSI program did so in one of two ways. Some States make direct payments to individuals and some deposit the payment with the Federal Government, which then makes the supplemental payment to the individual. The monthly data are seasonally adjusted, using the Census X-11 seasonal adjustment procedure. Annual and quarterly estimates are summed from the monthly estimates.

Annual data for cash general assistance are extrapolated judgmentally from the 1984 level established in an informal BEA survey of the States having such programs. Before 1981, data were available from HHS. Monthly seasonally adjusted estimates are interpolated from the annual estimates and extrapolated judgmentally. Quarterly estimates are summed from the monthly estimates.

Transfer payments for energy assistance to low-income individuals are recorded for 1977 and later years. Annual estimates are derived from Federal grants-in-aid, modified to exclude administrative costs using information from the *Social Security Bulletin: Annual Statistical Supplement*. The remainder is transfer payments and includes both cash payments to low-income individuals and vendor payments to suppliers. Information on independent State programs is from a study by the Maryland Energy Assistance Program [39]. Monthly seasonally adjusted estimates are interpolated from the annual estimates without indicator and extrapolated judgmentally. Quarterly estimates are summed from the monthly estimates.

The remainder of public assistance consists of emergency assistance and medical insurance premiums paid for indigents. Monthly data for emergency as-

sistance are supplied along with those for AFDC, as stated above. Monthly data for medical insurance premiums paid on behalf of indigents are from the Social Security Administration, HHS [42]. The monthly data are seasonally adjusted, using the Census X-11 seasonal adjustment procedure. Annual and quarterly estimates are summed from the monthly estimates.

Education.—These payments are separately identified in *State Finances* as “assistance and subsidies.” These payments include scholarships, stipends, fellowships, and similar payments to individuals and State support for nonprofit educational institutions. Monthly seasonally adjusted estimates are interpolated from the annual estimates without an indicator, and the current estimates are extrapolated judgmentally. Quarterly estimates are summed from the monthly estimates.

Employment and training.—Since 1982, employment and training has consisted of payments to nonprofit institutions for training programs under the Job Training Partnership Act of 1982. Annual data are from the analysis of Federal grants in aid to State and local governments described in part II. Monthly seasonally adjusted estimates are interpolated from the annual estimates without an indicator, and the current estimates are extrapolated judgmentally. Quarterly estimates are summed from the monthly estimates.

In earlier years, employment and training included payments under the Comprehensive Employment and Training Act (CETA) and its predecessor, the Public Employment Program (PEP), which from 1971 until 1982 provided funds for employment in State and local governments, for employment in nonprofit organizations, and for job training programs run by nonprofit institutions. Employment in State and local governments is included in the compensation component of purchases; the remainder is included in transfer payments to persons. For employment in nonprofit institutions, estimates were based on occasional informal estimates of CETA employment in nonprofit institutions made by the Department of Labor’s Employment and Training Administration (ETA) and on staff studies done by the Urban Institute [58]. ETA estimates of average pay per CETA participant were multiplied by monthly estimates of nonprofit employment to derive dollar amounts for these transfers. For job training programs run by nonprofit institutions, dollar amounts for training grants were available quarterly from ETA [53].

Other transfer payments.—Transfer payments compensating victims of crime are currently being paid in 37 States. Since 1986, annual data have been available, with a 1-year lag, from the Department of Justice, Office for Victims of Crime [48]. Estimates for 1979–85 are based on a compilation of data on State benefits by the New York Crime Victims Board [19]. Between 1968 and 1978, data were collected

by BEA on an informal basis from individual States. Monthly seasonally adjusted estimates are interpolated from the annual estimates without an indicator, and the current estimates are extrapolated judgmentally. Quarterly estimates are summed from the monthly estimates.

Since 1981, annual payments to bona fide residents of the State of Alaska have been made from the earnings of a fund that receives payments from companies exploiting the North Slope fields. Monthly data on a current basis are available from the office of the Alaska Department of Revenue. The monthly data are seasonally adjusted using the Census X-11 seasonal adjustment procedure, and the annual and quarterly estimates are summed from the monthly series.

Calendar year estimates for the remaining transfer payments are prepared, primarily from *COG/GF* or *State Finances*. The estimates are summed, and monthly seasonally adjusted estimates are interpolated from the aggregate without an indicator; current estimates are extrapolated judgmentally. The remaining transfer payments are: (1) Veterans bonuses, from *State Finances*; (2) other veterans benefits, from the State of Massachusetts; (3) other public welfare, which is extrapolated from the *State Finances* 1962 level, using other public welfare expenditures as an indicator; (4) health, which is extrapolated from the *State Finances* 1962 level, using other health expenditures as an indicator; (5) foster care payments to foster parents, which are based on data on Federal Government expenditures under Section IV-E of Title XX of the Social Security Act [44], using relationships based on a 1984 survey of State payments for foster care [16]; and (6) foster care payments to institutions, which are extrapolated from a 1983 study by the American Public Welfare Association [2].

Net interest paid

Net interest paid is total interest paid by State and local government less interest received, including that received by social insurance funds and the imputed interest received by State and local governments.

Calendar year estimates of interest paid and monetary interest received by State and local government, including that received by social insurance funds other than employee retirement funds, are prepared by adjusting *COG/GF* or *State Finances* fiscal year data by the general procedure described earlier. For workers' compensation and temporary disability systems, all investment earnings are taken to be interest.

Fiscal year data on total investment earnings of employee retirement systems, reported in the Census Bureau's *Retirement Systems*, are converted to a calendar year basis in the same way as contributions to these systems. Annual estimates of the dividend earnings of these systems (described below) and, from 1985 forward, of their net realized capital gains are subtracted

to derive the interest earnings of retirement funds as a residual.

For all of these monetary interest flows, data are available only with a 2-year lag. For both the current and the first annual revision estimates, the estimates for each of these flows are extrapolated judgmentally.

Quarterly seasonally adjusted estimates for monetary interest paid and received by State and local governments, their retirement systems, and their other social insurance funds are interpolated without indicator and extrapolated judgmentally; the seasonally adjusted and unadjusted estimates are the same.

The annual estimate of imputed interest paid to State and local government is prepared as part of the estimates of imputed interest and associated service charges for the other sectors. It is limited to the State and local government share of total imputed interest paid by commercial banks. (Total imputed interest paid by commercial banks equals the sum of monetary interest received on depositor's funds, dividends received, income received on direct lease financing, and imputed interest received from Federal Reserve banks less interest paid on deposits.) Estimates are from Federal Deposit Insurance Corporation and Federal Reserve Board data on property income paid and received by commercial banks [6, 7]. The State and local government share of this total is equal to the share of State and local government deposits in commercial bank deposit liabilities, from Federal Reserve Board data on the ownership of deposits [13]. Quarterly estimates are derived by interpolation, using flow of funds account data on holdings as the indicator [7]; current estimates are extrapolated judgmentally.

Dividends received

The dividends received by State and local governments, primarily by their retirement systems, are treated as negative expenditures. With the exception of their retirement systems, most governments do not routinely invest in equities, because liquidity (after safety) is most often the primary concern of government financial managers. In recent years, some State governments have reported small volumes of equity earnings in footnotes in *State Finances*. These earnings (from current charges and miscellaneous general revenue) are reported here together with dividend earnings of retirement systems.

Estimates of dividends received by State and local retirement systems have been prepared for 1968 and subsequent years; before 1968, they are assumed to be small and included in interest received. Estimates are derived from *Finances of Selected Public Employee-Retirement Systems* [28] data for end-of-quarter holdings of corporate equity; beginning and ending holdings are averaged to represent quarterly holdings, which then are multiplied by quarterly averages of the Standard and Poor's 500 stock dividend-

price ratio for common stocks [20]. Current estimates are extrapolated judgmentally.

Subsidies

State and local subsidies consist of payments to railroads. Before 1983, annual data, provided by the Association of American Railroads [4], were interpolated quarterly without indicator. From 1983 forward, the estimates are extrapolated judgmentally from the 1982 level.

Current surplus of government enterprises

The current surplus of government enterprises is estimated primarily from *COG/GF* and *State Finances* data for 11 categories of enterprises: Water, sewerage, gas, electricity, toll facilities, liquor stores, air terminals, water terminals, housing and urban renewal, public transit, and a residual category that includes State lotteries, off-track betting, local parking, and miscellaneous activities.

To estimate current operating receipts, BEA adds to *COG/GF* utilities and liquor stores revenue an estimate of other enterprise revenue, which is included in *COG/GF* current charges and miscellaneous general revenue, as shown in table III-4. An estimate of non-operating receipts included in the *COG/GF* data for electric utilities [36] is removed, as described earlier. Quarterly seasonally adjusted estimates of current operating receipts are interpolated from the annual estimates without indicator and extrapolated judgmentally.

Estimates of subsidies paid by the Federal Government to State and local government enterprises are also added, because *COG/GF* does not include them in enterprise revenues. Federal subsidy payments to these enterprises are derived from analyses of the *Monthly Treasury Statement* [56]. Quarterly seasonally adjusted estimates are prepared using the Census X-11 seasonal adjustment procedure. (See part II, Federal Government Transactions.)

To estimate current operating outlays, BEA adds to the *COG/GF* current operating expenditures, by function, additional compensation outlays—that is, employer contributions to social insurance funds on behalf of enterprise employees. To avoid double-counting, BEA subtracts data on State liquor store inventory change from the current operating outlays of liquor stores. This inventory change is derived from *State Finances* and is included in purchases of goods and services. Quarterly seasonally adjusted estimates of current operating outlays are interpolated from the annual estimates without indicator and extrapolated judgmentally.

For specific types of enterprises, additional source data augment *COG/GF*. Data on local toll facilities are from *Highway Statistics* [54], Federal Highway Administration. Sporadic reports from local governments in New York in which betting facilities are located are used to assemble information on off-track betting. Currently, information from *Gaming and Wagering Business* [9] is used to estimate that part of enterprise surplus generated by lotteries; annual data on lottery receipts and expenditures, with a 1-year lag, and current quarterly data on gross lottery sales supplement the receipts and expenditures data from *COG/GF*.

For other enterprise revenues, enterprise compensation, and other current expenditures, quarterly seasonally adjusted estimates are interpolated without indicator from the annual estimates and extrapolated judgmentally.

Wage accruals less disbursements

The estimates of wage accruals less disbursements, which convert wages and salaries from an accrual basis to a payments basis, are prepared along with the other compensation estimates. Differences between accruals and disbursements arise primarily because of strikes. Estimates are based on contact with the jurisdictions affected and are prepared as necessary.

Surplus or deficit (—), national income and product accounts

The NIPA surplus or deficit is the excess of total receipts over total expenditures. The measure is divided into two parts: The surplus generated by the excess of receipts over outlays of the social insurance funds and the surplus or deficit resulting from all other government transactions. To accomplish this division, the part of purchases that represents administrative expenses of the social insurance funds must be identified. Data for administrative expenditures are available in *State Finances* for workers' compensation and temporary disability systems; *Retirement Systems* has similar data after 1981; prior to 1982, such data were available only in the quinquennial censuses of governments. In all cases, these data are averaged to calendar years, and quarterly seasonally adjusted estimates are interpolated from the annual estimates without indicator; current quarterly estimates are extrapolated judgmentally.

The social insurance fund surplus is calculated as the sum of contributions, interest, and dividends received by social insurance funds, less the sum of social insurance benefits and administrative expenses.

The other funds surplus or deficit equals the NIPA surplus or deficit minus the social insurance fund surplus.

Constant-Dollar Purchases of Goods and Services

For the most part, constant-dollar estimates of State and local government purchases of goods and services are prepared by deflating current-dollar estimates by suitable price indexes. The principal exceptions are compensation and imputed financial services, both of which are estimated by extrapolating base-year values by quantity indicators. The price indexes are taken primarily from: *Current Construction Reports* [26], *BLS Producer Prices and Price Indexes* [52], and *BLS CPI Detailed Report* [49]. The specific price indexes used are shown in table III-6. The order of table III-6 is that used for the current-dollar estimates of purchases of goods and services shown in NIPA table 3.8. The advance estimates reflect preliminary BEA estimates of the construction price indexes, 2 and occasionally 3 months of PPI's, and 2 months of CPI's. The price data are complete by the final estimates.

Compensation of employees

The constant-dollar estimates of the compensation component are obtained by extrapolating base-year compensation by an index of employee hours that is adjusted, to the extent possible, for changes in experience and education—that is, in the quality of the workforce. This procedure is designed to approximate specification pricing for output produced by general government. It assumes that, for a given type of employee, output per hour worked does not change over time and that productivity changes occur for the workforce only because of changes in the mix of employees with respect to their level of experience, their education, and the functions in which they are employed. The mix is defined, to the extent possible, by function, by level of experience, and by education. For each type of employee for which BEA has data, constant-dollar compensation in a given year is the product of average base-year (1982) compensation and an index of employee hours that is the product of employment measured in full-time equivalent units and the ratio of average weekly hours worked to base-year average weekly hours worked.

Monthly and annual measures of full and part-time employment and hours worked are derived for education and for noneducation from BLS tabulations of average weekly hours worked and of employment and wages reported by employers covered by State unemployment insurance programs [50, 51]. The annual Census Bureau report, *Public Employment* [30], is used to convert full- and part-time measures of employment to full-time equivalents. Before 1979, these unemployment insurance data did not cover State and local government employment. The estimates before 1979 were based on the annual *Public Employment*

report and on monthly data from BLS establishment surveys.

For estimates of constant-dollar education compensation, eight employee types are identified, six from *Public Employment* and two from a 1973 study from the Office of Education, Department of Health, Education, and Welfare [35]. For primary-secondary teachers—the largest category—independent data are available to adjust for changes in the composition of employment. Demographic and salary data collected in an annual National Education Association survey of teachers [17] are distributed into 20 groups defined by teacher characteristics—years of experience and level of educational attainment. For each of the 20 groups, reported average base-year salary is multiplied by employment; the results are summed and a measure of average salary (valued in base-year prices) for primary-secondary teachers in the current period is derived. The difference between this measure and base-year average salary represents the shift in the composition of employment with respect to experience and educational attainment. Average base-year compensation is then multiplied by the product of this composition shift and the index of employee hours described above—that is, the product of employment measured in full-time equivalent units and the ratio of average weekly hours worked to base-year average weekly hours worked.

For the remaining seven categories of education employment, average base-year compensation for each category is multiplied by the index of employee hours described above—that is, the product of employment measured in full-time equivalent units and the ratio of average weekly hours worked to base-year average weekly hours worked. The results are summed over all eight categories to constant-dollar education compensation.

For noneducation compensation, the BLS data are disaggregated into two categories: Federally funded public service employment and other. Public service employment was a component of State and local government employment from 1972 to 1981. Measures of public service employment and an estimate of average 1982 compensation for these employees are derived from internal documents of the Employment and Training Administration, Department of Labor [53].

The remainder of noneducation constant-dollar compensation is estimated as the product of average base-year compensation and the index of employee hours—that is, the product of full-time equivalent employment and the ratio of average weekly hours worked to base-year average weekly hours worked. For the years 1950–70, a factor designed to reflect rising educational and technical attainments in the Federal workforce was applied to State and local noneducation employment.

Table III-6.—Price Indexes Used In the Deflation of State and Local Government Purchases of Goods and Services

Category	Price index (or quantity extrapolator of base-year value)	1982 weight (Percent)
Purchases of goods and services	IPD calculated from detail below	100.000
Durable goods	IPD calculated from detail below	3.979
Textile housefurnishings	PPI for textile housefurnishings .....	.056
Tires, tubes, tread, and repair materials	PPI for tires, tubes, tread, and repair materials .....	.067
Hand and edge tools and lawn and garden equipment	PPI for hand and edge tools .....	.059
Miscellaneous metal products	PPI for miscellaneous metal products .....	.090
Agricultural machinery and equipment	PPI for agricultural machinery and equipment .....	.046
Construction machinery and equipment	PPI for construction machinery and equipment .....	.224
Metalworking machinery and equipment	PPI for metalworking machinery and equipment .....	.039
General purpose machinery and equipment	PPI for general purpose machinery and equipment .....	.102
Special industry machinery and equipment	PPI for special industry machinery and equipment .....	.138
Integrating and measuring instruments	PPI for integrating and measuring instruments .....	.067
Motors, generators, motor generator sets	PPI for motors, generators, motor generator sets .....	.076
Switchgear, switchboard, etc. equipment	PPI for switchgear, switchboard, etc. equipment .....	.016
Electronic components and accessories	PPI for electronic components and accessories .....	.034
Miscellaneous electrical machinery and equipment	PPI for miscellaneous electrical machinery and equipment .....	.091
Calculating and accounting machines	PPI for calculating and accounting machines .....	.019
Typewriters and office machines n.e.c.	PPI for typewriters .....	.111
Machine shop products	PPI for machine shop products .....	.010
Wood commercial furniture	PPI for wood commercial furniture .....	.077
Metal commercial furniture	PPI for metal commercial furniture .....	.300
Household appliances	PPI for household appliances .....	.058
Home electronic equipment	PPI for home electronic equipment .....	.084
Motor vehicles	PPI for motor vehicles .....	.953
Motorcycles	PPI for motorcycles .....	.013
Motor vehicle parts	PPI for motor vehicle parts .....	.124
Aircraft	PPI for fixed wing, utility aircraft .....	.004
Railroad equipment	PPI for railroad equipment .....	.146
Sporting and athletic goods	PPI for sporting and athletic goods .....	.073
Small arms	PPI for small arms .....	.003
Photographic and photocopying equipment	PPI for photographic equipment .....	.067
Mobile homes	PPI for mobile homes .....	.001
Musical instruments	PPI for musical instruments .....	.034
Phonograph records and prerecorded tapes	PPI for phonograph records and prerecorded tapes .....	.013
Books and other durable printed material	IPD for Federal Government purchases of nondefense printing .....	.497
Other durable goods	PPI for finished goods less food and energy .....	.262
Computers and peripherals	IPD for computer equipment. (BEA computer price index.) .....	.012
Nondurable goods	IPD calculated from detail below	9.064
Alcoholic beverages	PPI for alcoholic beverages	-.003
Animal food and feed	PPI for prepared animal feeds .....	.023
Finished fabrics	PPI for finished fabrics .....	.026
Apparel	PPI for apparel .....	.152
Coal	PPI for coal .....	.049
Petroleum products	Composite index of PPI's for middle distillates, gasoline, and residual fuels	2.780
Industrial chemical products	PPI for industrial chemicals .....	.437
Prepared paint and allied products	PPI for prepared paint .....	.053
Drugs and pharmaceuticals	PPI for drugs and pharmaceuticals .....	.650
Agricultural chemicals and chemical products	PPI for agricultural chemicals and chemical products .....	.206
Soap and synthetic detergents	PPI for soap and synthetic detergents .....	.099
Miscellaneous rubber products	PPI for miscellaneous rubber products .....	.141
Miscellaneous plastic products	PPI for plastic products .....	.087
Pulp, paper, and products excluding building paper	PPI for pulp, paper, and products excluding building paper .....	.562
Metal containers	PPI for metal containers .....	.009
Miscellaneous metal products	PPI for miscellaneous metal products .....	.060
Electric lamps and bulbs	PPI for electric lamps and bulbs .....	.059
Glass and glass products	PPI for flat glass .....	.132
Construction sand, gravel, and crushed stone	PPI for construction sand, gravel, and crushed stone	-.015
Toys, games, and children's vehicles	PPI for toys, games, and children's vehicles .....	.039
Small arms ammunition	PPI for small arms ammunition .....	.015
Cigarettes	PPI for cigarettes	-.006
Photographic supplies	PPI for photographic equipment .....	.229
Pens, pencils, and other marking devices	PPI for pens and pencils .....	.026
Brooms and brushes	PPI for brushes .....	.012
Maintenance and repair materials	CPI for maintenance and repair commodities	1.479
Printed materials	IPD for Federal Government purchases of nondefense printing .....	.847
Food	PPI for finished consumer foods .....	.472
Other nondurable goods	PPI for finished goods less food and energy .....	.442

Table III-6.—Price Indexes Used in the Deflation of State and Local Government Purchases of Goods and Services—Continued

Category	Price index (or quantity extrapolator of base-year value)	1982 weight (Percent)
Services	IPD calculated from detail below.....	75.113
Compensation of employees.....	IPD calculated from detail below.....	61.482
Education compensation.....	Base year value extrapolated by full-time equivalent employment, average work week, and (for primary and secondary teaching) change in years of experience and level of educational attainment.	33.143
Other compensation.....	Base year value extrapolated by full-time equivalent employment and average work week.	28.339
Other services.....	IPD calculated from detail below.....	13.631
Electric service.....	PPI for commercial power, 40 kw demand.....	1.684
Air transportation.....	CPI for airline fares.....	.491
Insurance.....	CPI for automobile insurance.....	.086
Automobile leasing, repair, and parking.....	CPI for other automobile related fees.....	.292
Educational services.....	CPI for college tuition.....	.067
Entertainment services.....	CPI for entertainment services.....	-.312
Transportation and warehousing.....	IPD for Federal Government purchases of nondefense transportation service.	.288
Lodging while out of town.....	CPI for lodging while out of town.....	.262
Miscellaneous repair and other services.....	CPI for maintenance and repair services.....	2.253
Medical care.....	CPI for medical care services.....	.826
Gas production and service.....	CPI for utility piped gas.....	.692
Postal services.....	IPD for Federal Government purchases of nondefense parcel post service.	.211
Professional services.....	CPI for professional services.....	2.898
Rental services.....	CPI for residential rent.....	1.479
Communication services.....	CPI for telephone services.....	.552
Local transportation.....	CPI for intracity mass transit.....	.748
Water, sewerage, and sanitation services.....	CPI for water and sewerage maintenance.....	.217
Services furnished without payment by financial intermediaries except life insurance carriers and private noninsured pension plans.	Base-year value extrapolated by paid employee hours of commercial banks.	.899
Structures	IPD calculated from detail below.....	11.844
New construction put-in-place.....	IPD calculated from detail below.....	11.825
Residential buildings.....	Bureau of the Census price index of new one-family houses sold, excluding value of lot.	.399
Education buildings.....	Average of Turner Construction Company building cost index and Bureau of the Census price index of new one-family houses sold, excluding value of lot.	1.600
Hospitals and health facilities.....	Turner Construction Company building cost index.....	.370
Other buildings.....	Average of Turner Construction Company building cost index and Bureau of the Census price index of new one-family houses sold, excluding value of lot.	1.309
Highways and streets.....	Federal Highway Administration composite highway construction index.	4.221
Conservation and development of resources.....	Bureau of Reclamation composite construction cost trends index.....	.246
Sanitation and sewerage.....	Environmental Protection Agency sewage treatment and sewer construction cost index.	1.498
Water supply facilities.....	Average of Federal Energy Regulatory Commission pipeline index and Environmental Protection Agency sewage treatment and sewer construction.	.786
Miscellaneous nonbuilding construction.....	Average of the Bureau of Reclamation composite construction cost trends index and Federal Highway Administration composite highway construction index.	.482
Electric supply facilities.....	Bureau of the Census Handy-Whitman index for electric light and power plants.	.595
Transit facilities.....	Federal Highway Administration highway structures construction index...	.317
Net purchases of existing nonresidential structures.....	IPD for purchases of new private nonresidential structures.....	.139
Net purchases of existing residential farm structures.....	IPD for purchases of new private residential farm structures.....	.003
Net purchases of existing residential nonfarm structures.....	IPD for purchases of new private residential nonfarm structures.....	.180
Government force-account construction compensation.....	CPI for maintenance and repair services.....	-.303

Note.—This table reflects weights used for 1982. It should be understood that the system is not totally static; changes are made as one index is replaced by another, or for other reasons. The most important change since 1982 was for force-account compensation; for 1984 and later years, the implicit price deflator for noneducation compensation is used, rather than the maintenance and repair services index.

IPD Implicit price deflator.
PPI Producer price index.
CPI Consumer price index.

Structures

Constant-dollar estimates of State and local government purchases of structures are derived by deflating 11 types of new construction, net purchases of existing structures, and new construction force-account compensation.

New construction.—The 11 types of new construction put in place are deflated by dividing the quarterly seasonally adjusted, current-dollar estimates by the price indexes shown in table III-6. These indexes are from *Current Construction Reports* [26]. These indexes are smoothed by a three-quarter moving average or are seasonally adjusted using the Census X-11 seasonal adjustment procedure. There are two exceptions: The Census Bureau index for one-family houses sold and the DOT highway composite index [55] are smoothed by a three-quarter moving average (and the latter is then seasonally adjusted). (Prior to 1985 the Bureau of the Census index was used with seasonal adjustment.)

Net purchases of existing structures.—Net purchases of existing residential and nonresidential structures are deflated by BEA implicit price deflators for new private nonfarm residential structures, for new private farm residential structures, and for new private nonresidential structures. These estimates are prepared along with other components of gross private domestic fixed investment.

New construction force-account compensation.—The value of new construction force-account compensation is deflated by the implicit deflator for noneducation compensation from 1984 forward. Before 1984, the deflator was the CPI for maintenance and repair services.

Financial services

Constant-dollar estimates of the services rendered without payment to State and local governments by depository institutions—that is, financial intermediaries except life insurance carriers and private non-insured pension plans—are obtained by extrapolating the base-year value by BEA estimates of the paid employee hours in commercial banks, based on BLS tabulations of average weekly hours worked and of employment and wages reported by employers covered by State unemployment insurance programs [50, 51].

Durable goods, nondurable goods, and other services

Deflation of purchases of durable goods, nondurable goods, and other services is performed for approximately 80 types of purchases using detailed price indexes, largely components of the PPI. The commodity detail is estimated from *COG/GF* data on expenditures for current operations and for equipment

and on general government sales, by function, as described in the derivation of current-dollar purchases, using commodity detail from BEA's benchmark I-O tables. Table III-6 shows the commodity composition of durable goods, nondurable goods, and services, the 1982 weights, and the associated price indexes; negative entries in table III-6 indicate government sales.

In the absence of direct measures of the commodity composition of State and local government purchases of durable goods, nondurable goods, and services, an indirect procedure is used to estimate the commodity detail from the available annual data on the major categories of purchases—that is, gross purchases of equipment, books and audiovisual materials, equipment parts, nondurable goods, and services; and sales of durable goods, nondurable goods, and services. For each function, the quarterly current-dollar estimates for the major categories of purchases are distributed among commodities using the quarterly commodity price indexes shown in table III-6 and quarterly constant-dollar commodity weights, derived from BEA's benchmark I-O tables for 1967, 1972, and 1977 [34 and references therein].¹ Then, for each commodity, the current-dollar estimates are deflated by the commodity price index shown in table III-6 and summed over all functions.

The first step is to prepare the quarterly constant-dollar commodity weights. The I-O benchmark commodity detail, classified by function, is converted to constant base-year (1982) prices, using the price indexes shown in table III-6. For each function, the constant-dollar commodity weights are interpolated annually between I-O benchmarks and held constant after 1977. For the quarters within each year, the constant-dollar commodity weights are held constant at the annual level.

The second step is to prepare the quarterly current-dollar estimates for each major category and function. The annual current-dollar estimates for each major category are interpolated quarterly without indicator at the aggregate—that is, all-function—level; the aggregate quarterly pattern then is used to interpolate the estimates of purchases by each function within the major category.

The third step is to estimate the quarterly current-dollar commodity detail for each function. Each quarterly constant-dollar commodity weight (from the first step) is multiplied by the price of that commodity and the product adjusted proportionately so that the sum of these products over all commodities within the function and major category is equal to the given current-dollar values (from the second step).

The fourth step is to derive constant-dollar purchases of durable goods, nondurable goods, and other

1. The I-O commodity detail is based on an examination of information from a very small sample of governments, on some direct estimates of expenditures, and on inferences drawn from the expenditure patterns of private-sector organizations engaged in similar activities. (Before 1959, estimates of detailed purchases were prepared at the aggregate level only, without regard to functional categories, using commodity weights from the 1958 I-O table.)

services. Each current-dollar commodity estimate (from the third step) is deflated using the appropriate index shown in table III-6. Total constant-dollar purchases of each commodity are derived by summing the commodity detail, by function, over all functions. Constant-dollar purchases of durable goods, nondurable goods, and other services are obtained by summing the relevant commodity totals.

The preceding discussion applies to estimates for annual revisions and comprehensive revisions. For current estimates, a truncated procedure is used that re-

quires no functional detail. The aggregate constant-dollar estimates of durable goods, nondurable goods, and other services are extrapolated judgmentally from the final quarter of the most recent full year of an annual revision. The aggregate current-dollar estimates of durable goods, nondurable goods, and other services are obtained by multiplying the constant-dollar estimates by price indexes constructed from the price indexes shown in table III-6, using weights based on the constant-dollar commodity distribution from the final quarter of the most recent full year.

Sources

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Appendix III-A

Analysis of Charges and Miscellaneous General Revenue, COG, 1982

The first seven columns of table III-A-1 show the derivation of table III-1, column 1, lines 9 through 15. The entries in the first line of table III-A-1 are the table III-1 entries.

The entry in the first line of table III-A-1, column 8, is the coverage adjustment shown in table III-1, column 5, line 15.

The entry in the first line of table III-A-1, column 9, is the other taxes and nontaxes entry shown in table III-1, column 12, line 15, minus the timing adjustment shown in table III-1, column 8, line 15.

The entry in the first line of table III-A-1, column 10, is the indirect business tax and nontax accruals entry shown in table III-1, column 14, line 15.

Table III-A-1.—Distribution of Current Charges and Miscellaneous General Revenue Among Categories of Receipts and Expenditures, FY 1982

[Billions of dollars]

	COG Total	Govern- ment sales	Sale of property	Enter- prise revenue	Interest earnings	Dividends received	Other			
							Total	Coverage adjust- ment	Personal nontaxes	Indirect business nontaxes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Charges and miscellaneous general revenue, COG.....	104.0	13.0	0.7	15.0	25.8	0.1	49.4	1.3	36.4	11.7
Current charges:										
Education:										
School lunch sales.....	2.3	2.3								
Institutions of higher education:										
Auxiliary enterprises ¹	5.0	5.0								
Other ¹	8.6						8.6		8.6	
Other education ²	1.3	1.0					.3		.3	
Hospitals.....	17.4						17.4		17.4	
Sewerage.....	5.0			5.0						
Sanitation other than sewerage (local only) ³	1.4	1.0					.4		.4	
Parks and recreation.....	1.5						1.5		1.5	
Natural resources.....	.8	.8								
Housing and urban renewal.....	1.5			1.5						
Highways ⁴	2.0	.1		1.9						
Water transportation and terminals.....	1.0			1.0						
Air transportation.....	2.3			2.3						
Parking facilities (local only).....	.4			.4						
Miscellaneous commercial activities ¹.....	.6			.6						
Other ¹	5.2	1.4					3.8	.3	1.6	1.9
Miscellaneous general revenue:										
Special assessments.....	1.6						1.6			1.6
Rents and royalties ¹ ⁶	7.1						7.1	.2		6.9
Donations ¹	2.6						2.6		2.3	.3
Fines and forfeits ¹	5.2						5.2		4.1	1.1
Sale of property ¹ ⁷.....	.7		.7							
Interest earnings.....	25.8				25.8					
Other:										
Lotteries (State only) and off-track betting (local only).....	2.1			2.1						
All other ³	2.7	1.5		.1		.1	1.0	.9	.2	

1. Published in *Governmental Finances* for State; estimated by BEA for local (from underlying unpublished detail).

2. Available in summary detail underlying *Governmental Finances*.

3. The distribution of the published total to NIPA categories is based on input-output analysis.

4. Data on current charges for local highways are available in underlying unpublished detail. The distribution between toll facilities revenues (enterprise revenues) and other charges (government sales) is based on data from *Highway Statistics*, Federal Highway Administration.

5. Distribution of "other" from BEA analysis of data from Census records for individual large governments.

6. Data on oil bonuses are from direct contact with States. Such payments are included in *Governmental Finances* rents and royalties, but are excluded, as a coverage adjustment, from NIPA transactions.

7. This represents sales of land and existing structures. The total is distributed between land and structures, as are the purchases of land and existing structures. The sale of existing structures is a negative addition to gross purchases of structures.

Note.—Except where noted, these data can be found in *Census of Governments, 1982*.

COG *Census of Governments*.

Appendix III-B

State and Local Government Functions

General control
Financial administration
Police
Fire
Correction
Elementary and secondary education
Higher education
Other education (including libraries)
Health
Hospitals
Government employee retirement and disability
Workers' compensation
Temporary disability insurance
Public assistance
Veterans programs
Housing and urban renewal¹
Water supply¹
Sewerage¹
Sanitation
Parks and recreation
Natural gas¹
Agriculture
Natural resources
Electricity supply¹
Regular highways
Toll highways¹
Water terminals¹
Air terminals¹
Transit¹
Protective inspection and regulation
Employment and training
Liquor stores¹
Miscellaneous commercial activities (includes lotteries, off-track betting,
parking, and other miscellany)¹
Other and unallocable

1. These are enterprise functions. In the national income and product accounts, purchases of goods and services by enterprises consist of capital purchases only. Current operating purchases are included as an expense in the derivation of subsidies less current surplus of government enterprises.

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